SOUTHERN NUCLEAR OPERATING COMPANY

JOSEPH M. FARLEY NUCLEAR PLANT

UNITS 1 & 2

E M E R G E N C Y P L A N

SAFETY RELATED

APPROVED:

C. A. Gayheart
VICE PRESIDENT

Date Approved: 4/2/2015

Date Issued: 4/16/2015

Rev. 64

INDEX OF EFFECTIVE PAGES
PART I – SITE PLAN

PAGE	REV. NO.	PAGE	REV. NO.	PAGE	REV. NO.
i	56	46	64		
ii	49	47	25		
iii	49	48	25		
iv	49	49	41		
v	49	50	41		
vi	63	51	41		
vii	53	52	56		
1	42	53	56		
2	47	54	56		
3	47	55	59		
4	47	56	57		
5	49	57	64		
6	64	58	52		
7	52	59	56	APPENDIX 1(A)	
8	55	60	61	A-1	41
9	64	61	63	A-2	49
10	56	62	51	A-3	DEL
11	50	63	49		
12	56	64	49	APPENDIX 2(B)	
13	56	65	44	B-i	DEL
14	44	66	63	B-ii	DEL
15	61	67	63	B-1	64
16	61	68	61	B-2	DEL
17	61	69	51	B-3	DEL
18	41	70	42	B-4	DEL
19	64	71	64	B-5	DEL
20	52	72	64	B-6	DEL
21	53	73	56	B-7	DEL
22	41	74	42	B-8	DEL
23	33	75	51	B-9	DEL
24	64	76	61	B-10	DEL
25	42	77	64	B-11	DEL
26	41	78	64	B-12	DEL
27	42	79	50	B-13	DEL
28	46	80	41	B-13A	DEL
29	38	81	56	B-13B	DEL
30	42	82	61	B-13C	DEL
31	56	83	61	B-13D	DEL
32	50	84	61	B-13E	DEL
33	63	85	61	B-14	DEL
34	41	86	61	B-15	DEL
35	63	87	49	B-16	DEL
36	56	88	42	B-17	DEL
37	56			B-18	DEL
38	50			B-19	DEL
39	50			B-20	DEL
40	54			B-21	DEL
41	57			B-22	DEL
42	53			B-23	DEL
43	64			B-24	DEL
44	56			B-25	DEL
45	64			B-26	DEL

PAGE	REV. NO.	PAGE	REV. NO.	PAGE	REV. NO.
APPENDIX 2(B) (CONT'D)					
B-27	DEL	B-70	DEL	B-118	DEL
B-28	DEL	B-71	DEL	B-119	DEL
B-29	DEL	B-72	DEL	B-120	DEL
B-30	DEL	B-73	DEL	B-121	DEL
B-31	DEL	B-74	DEL	B-122	DEL
B-32	DEL	B-75	DEL	B-123	DEL
B-33	DEL	B-76	DEL	B-124	DEL
B-34	DEL	B-77	DEL	B-125	DEL
B-35	DEL	B-78	DEL		
B-36	DEL	B-79	DEL	APPENDIX 3(C)	
B-37	DEL	B-80	DEL	C-1	41
B-38	DEL	B-81	DEL	C-2	56
B-39	DEL	B-82	DEL	C-3	33
B-40	DEL	B-83	DEL		
B-41	DEL	B-84	DEL	APPENDIX 4(D)	
B-42	DEL	B-85	DEL	D-1	64
B-43	DEL	B-86	DEL	D-2	64
B-44	DEL	B-87	DEL	D-3	60
B-45	DEL	B-88	DEL	D-4	63
B-45A	DEL	B-89	DEL	D-5	61
B-46	DEL	B-90	DEL	D-6	64
B-47	DEL	B-91	DEL	D-7	58
B-48	DEL	B-92	DEL	D-8	52
B-49	DEL	B-93	DEL		
B-49A	DEL	B-94	DEL	APPENDIX 5(E)	
B-50	DEL	B-95	DEL	E-i	DEL
B-51	DEL	B-96	DEL	E-ii	DEL
B-51B	DEL	B-97	DEL	E-iii	DEL
B-52	DEL	B-98	DEL	E-iv	DEL
B-53	DEL	B-99	DEL	E-v	DEL
B-53B	DEL	B-100	DEL	E-1	64
B-54	DEL	B-101	DEL	E-2	61
B-55	DEL	B-102	DEL	E-3	DEL
B-55A	DEL	B-103	DEL	E-4	DEL
B-56	DEL	B-104	DEL	E-5	DEL
B-57	DEL	B-105	DEL	E-6	DEL
B-58	DEL	B-106	DEL	E-7	DEL
B-59	DEL	B-107	DEL	E-8	DEL
B-60	DEL	B-108	DEL	E-9	DEL
B-61	DEL	B-109	DEL	E-10	DEL
B-62	DEL	B-110	DEL	E-11	DEL
B-63	DEL	B-111	DEL	E-12	DEL
B-64	DEL	B-112	DEL	E-13	DEL
B-65	DEL	B-113	DEL	E-14	DEL
B-66	DEL	B-114	DEL	E-15	DEL
B-67	DEL	B-115	DEL	E-16	DEL
B-68	DEL	B-116	DEL	E-17	DEL
B-69	DEL	B-117	DEL	E-18	DEL

INDEX OF EFFECTIVE PAGES
PART I – SITE PLAN

PAGE	REV. NO.	PAGE	REV. NO.	PAGE	REV. NO.
APPENDIX 5(E) (CONT'D)		APPENDIX 6(F)		APPENDIX 10(J) CONT'D)	
E-19	DEL	F-1	44	J-4	56
E-20	DEL	F-2	DEL	J-5	56
E-21	DEL			J-6	56
E-22	DEL	APPENDIX 7(G)		J-7	56
E-23	DEL	G-i	41	J-8	56
E-24	DEL	G-1	41	J-9	56
E-25	DEL	G-2	41	J-10	61
E-26	DEL	G-3	49	J-11	56
E-27	DEL	G-4	56	J-12	56
E-28	DEL	G-5	41	J-13	56
E-29	DEL	G-6	41	J-14	56
E-30	DEL	G-7	41	J-15	56
E-31	DEL	G-8	41	J-16	56
E-32	DEL	G-9	41	J-17	56
E-33	DEL	G-10	46	J-18	56
E-34	DEL	G-11	41	J-19	64
E-35	DEL	G-12	41	J-20	60
E-36	DEL	G-13	41	J-21	56
E-37	DEL	G-14	44	J-22	56
E-38	DEL	G-15	41	J-23	56
E-39	DEL	G-16	41	J-24	56
E-40	DEL	G-17	41	J-25	56
E-41	DEL	G-18	61	J-26	56
E-42	DEL	G-19	52	APPENDIX 11(K)	
E-43	DEL	G-20	41	K-i	48
E-44	DEL	G-21	41	K-1	52
E-45	DEL	G-22	41	K-2	48
E-46	DEL	G-23	41	K-3	48
E-47	DEL	G-24	41	K-4	48
E-48	DEL	G-25	49	K-5	48
E-49	DEL			K-6	55
E-50	DEL	APPENDIX 8(H)		K-7	64
E-51	DEL	H-1	42	K-8	50
E-52	DEL	H-2	42	K-9	63
E-53	DEL	H-3	42	K-10	62
E-54	DEL			K-11	48
E-55	DEL	APPENDIX 9(I)		K-12	62
E-56	DEL	I-i	42	K-13	48
E-57	DEL	I-1	61	K-14	64
E-58	DEL	I-2	61	K-15	48
E-59	DEL	I-3	61	K-16	48
E-60	DEL	APPENDIX 10(J)		K-17	48
E-61	DEL	J-i	42	K-18	64
E-62	DEL	J-1	42	K-19	64
E-63	DEL	J-2	56	K-20	64
E-64	DEL	J-3	42	K-21	48

¶INDEX OF EFFECTIVE PAGES
PART I – SITE PLAN

PAGE	REV. NO.	PAGE	REV. NO.	PAGE	REV. NO.
APPENDIX 11(K)(CONT'D)		APPENDIX 11(K)(CONT'D)			
K-22	48	K-71	50		
K-23	58	K-72	50		
K-24	48	K-73	50		
K-25	62	K-74	48		
K-26	62	K-75	48		
K-27	62	K-76	59		
K-28	64	K-77	59		
K-29	62	K-78	64		
K-30	48	K-79	64		
K-31	48	K-80	50		
K-32	48	K-81	48		
K-33	48	K-82	48		
K-34	48	K-83	62		
K-35	48	K-84	48		
K-36	48	K-85	48		
K-37	48	K-86	48		
K-38	48	K-87	62		
K-39	48	K-88	48		
K-40	48	K-89	48		
K-41	48	K-90	48		
K-42	48	K-91	48		
K-43	48	K-92	48		
K-44	48	K-93	48		
K-45	48	K-94	48		
K-46	61	K-95	48		
K-47	48	K-96	48		
K-48	48	K-97	48		
K-49	48	K-98	48		
K-50	48	K-99	48		
K-51	48	K-100	48		
K-52	62				
K-53	50				
K-54	48				
K-55	50				
K-56	48				
K-57	48				
K-58	50				
K-59	50				
K-60	48				
K-61	58				
K-62	58				
K-63	48				
K-64	48				
K-65	48				
K-66	64				
K-67	50				
K-68	50				
K-69	48				
K-70	48				

JOSEPH M. FARLEY NUCLEAR PLANT
EMERGENCY PLAN

PART I. SITE PLAN

Table of Contents

List of Figures

List of Tables

List of Charts

JOSEPH M. FARLEY NUCLEAR PLANT

EMERGENCY PLAN

List of Appendices

JOSEPH M. FARLEY NUCLEAR PLANT

EMERGENCY PLAN

I. INTRODUCTION

A. PURPOSE

The purpose of the Joseph M. Farley Nuclear Plant (FNP) Emergency Plan is to protect the health and safety of the general public, persons temporarily visiting or assigned to the plant, and plant employees in accordance with the requirements set forth in Appendix E, "Emergency Plans for Production and Utilization Facilities", of 10CFR50, "Licensing of Production and Utilization Facilities".

Detailed procedures concerning the implementation of the Emergency Plan are not included here but are included in the Emergency Plan Implementing Procedures. These procedures, listed in Appendix 4(D), describe the duties of individuals and groups in the event of an emergency and they also serve as an interface of the Emergency Plan to plant operations, security and radiological control. Supporting emergency plans, which include the emergency plans for the states of Alabama, Georgia, and Florida, are listed in Appendix 6(F).

Information submitted in this plan was developed in accordance with the elements outlined 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". Information that describes the Emergency Operations Facility (EOF) for Southern Nuclear is outlined in Appendix 7(G).

B. SUMMARY

Southern Nuclear Operating Company corporate management has overall responsibility for maintaining a state of readiness to implement emergency plans for the protection of plant personnel, the general public and property from hazards associated with ionizing radiation originating within a company facility. The authority for planning, developing, and coordinating emergency control measures is discussed in Appendix 9 (I), Responsibility For The Planning Effort.

The Farley Plant Emergency Plan describes the organization and facilities both onsite and offsite that will be used to deal with a spectrum of accidents ranging from minor onsite incidents to those that could affect the general public.

There are three phases of responsive action contained within the Farley Plant Emergency Plan. The first phase includes initial actions directed toward the protection of personnel and the elimination of the potential for further exposure to the hazard.

The second phase includes immediate and planned action directed toward termination of the incident, containment of the effluent, establishment of incident boundaries, establishment of control, channeling of information and protection of the facility and equipment. The third phase is to restore the facility to its normal operating condition. To respond effectively utilizing these phases, emergencies are classified according to increasing severity as Notification of Unusual Event, Alert, Site Area Emergency or General Emergency.

C. GENERAL INFORMATION

1. Definitions

a. Affected Persons

Individuals who have been radiologically exposed or physically injured as a result of an accident to a degree requiring special attention, e.g., decontamination, first aid, or medical services.

b. Assessment Actions

Those actions taken during or after an accident which are collectively necessary to make decisions to implement specific emergency measures.

c. Controlled Area

The Controlled Area is the fenced area immediately surrounding the nuclear plant, access to which is controlled for industrial security purposes.

d. Corrective Action

Those emergency measures taken to terminate an emergency situation at or near the source of the problem.

e. Emergency Action Levels

Radiological dose rates; specific contamination levels of airborne, waterborne or surface deposited concentrations of radioactive materials; or specific instrument indications (including their rates of change) that may be used as thresholds for initiating such specific emergency measures as designating a particular class of emergency, initiating a notification procedure or initiating a particular protective action.

f. EOF Manager

The EOF Manager is responsible for the activation of the corporate emergency organization and for providing corporate emergency support prior to and following Emergency Operations Facility activation.

g. Emergency Director

The Plant Manager or designated alternate as the Emergency Director is charged with the responsibility of overall direction of the plant emergency activity and with initial interfacing with offsite groups.

h. Hostile Action

An act toward an NPP or its personnel that includes the use of violent force to destroy equipment, takes hostages, and /or intimidates the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. HOSTILE ACTION should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the NPP. Non-terrorism-based EALs should be used to address such activities, (e.g., violent acts between individuals in the owner controlled area.

i. Hostile Force

One or more individuals who are engaged in a determined assault, overtly or by stealth and deception, equipped with suitable weapons capable of killing, maiming, or causing destruction.

j. Offsite

All land and water areas outside the site property lines are considered to be offsite.

k. Onsite

All land and water areas inside the site property lines, use of which must be authorized by SNC, is referred to as onsite.

l. Population at Risk

Those persons for whom protective actions are being or would be taken.

m. Protected Area

The Protected Area is the fenced area immediately surrounding the plant Vital Areas, access to which is limited to those individuals with good cause for entry.

n. Protective Action Guides

Projected radiological dose or dose commitment values to individuals in the general population that warrant protective action following a release of radioactive material.

o. Protective Actions

Those emergency measures taken after an uncontrolled release of radioactive material has occurred for the purpose of preventing or minimizing radiological exposures that would be likely to occur to persons if the actions were not taken.

p. Radiation Controlled Area

The containment and the potentially contaminated portion of the Auxiliary Building and other areas onsite such as High Radiation Area, Radiation Area, Radioactive Materials Area, Airborne Radioactivity Area or Contaminated Area.

q. Recovery Actions

Those actions taken after the emergency to restore the plant as nearly as possible to its pre-emergency condition.

r. Vital Area

The Vital Areas are those plant areas which enclose major systems, equipment and components necessary to prevent or mitigate the consequences of an accident.

2. Emergency Ingress and Egress

a. Emergency Ingress

Ingress to any area of the plant can be obtained by the use of keys which are maintained by the Shift Supervisor and the Senior Security Force Member. In the case of electrically locked doors, keys will override the locking device. The necessary keys will be issued as required to combat the emergency.

b. Emergency Egress

Egress from any area of the plant is assured without keys, electrical power or other devices.

II. ORGANIZATION

The organization, responsibilities and functions of Southern Nuclear Operating Company onsite and offsite resources are individually discussed below. The onsite and offsite organizations provide emergency response during the activation, emergency, and recovery phases of accident response. Principal federal, state, local and private agencies are also discussed. Figures 12 and 13 illustrate the interrelationships of these organizations before and after Emergency Operations Facility activation respectively.

A. ONSITE

The normal onsite organization for Farley Nuclear Plant is shown on Figure 1. Management positions in the onsite organization meet the qualification requirements of ANSI N18.1-1971.

The qualifications for the professional-technical level positions also meet the requirements of ANSI N18.1-1971.

1. Technical Support Center (TSC)

The emergency onsite organization implemented for events requiring activation of the TSC is described in FNP-0-EIP-0 and is shown in Figure 2. Responsibilities and authorities of personnel in the TSC emergency organization are as follows:

a. Emergency Director (ED)

The ED is charged with the responsibility of overall direction of onsite emergency activity including near-site field monitoring team dispatch and control and interfacing with offsite organizations and agencies until the Emergency Operations Facility (EOF) is activated. After the EOF is functional, the ED is responsible for overall direction of all in-plant emergency activity. The ED shall supervise the TSC and manage the in plant recovery efforts and the in plant recovery organization. The ED shall communicate directly with the EOF Manager when the EOF is activated and shall have full authority to direct the onsite recovery efforts without further consultation when the situation demands such action. Following EOF activation when time permits the ED will consult with EOF personnel prior to initiating major evolutions or changes in plant configuration. The ED's general responsibilities include:

1) Staffing the TSC. The TSC will be staffed by plant supervisory personnel supplemented by plant engineering, technical and administrative personnel as necessary to staff the TSC 24 hours a day and discharge the responsibilities discussed below.

2) Evaluating the classification of the emergency and amending as appropriate. Terminating an emergency level will not be delegated to other elements of the emergency organization and will be performed in accordance with approved procedures.

3) Verifying correct control room response to the emergency classification.

4) Determining radiological status and initiating notifications to state agencies (and local agencies for General Emergencies). The decision to notify offsite government agencies may not be delegated to any other element of the emergency organization.

5) Initiating, on initial or upgrade emergency notifications, recommendations to state agencies on advisability of evacuations. Recommendations to local agencies when state authorities cannot be contacted for immediate evacuation may not be delegated to any other element of the emergency organization.

6) Initiating rescue or emergency repair operations as appropriate.

7) Maintaining plant security.

8) Establishing communications with and providing information to the EOF Manager.

In fulfilling the above listed responsibilities the Emergency Director (ED) is guided by the procedures listed below:

FNP-0-EIP-8.1 Emergency Phone Directory
FNP-0-EIP-8.3 Communication Equipment Operating Procedures
NMP-EP-104 Dose Assessment
NMP-EP-110 Emergency Classification Determination and Initial Action
NMP-EP-111 Emergency Notifications
NMP-EP-112 Protective Action Recommendations

The ED position is initially filled by the Shift Manager until relieved by the on-call ED. It is the intent of SNC that the ED will be transferred from the Control Room as soon as practicable.

The line of succession of individuals who may serve as the ED is as follows:

Vice President – Nuclear Plant Site

Plant Manager

Site Support Manager

Operations Director

On-call Operations Supervisor

Shift Manager

Shift Supervisor

Other Managers or staff designated by the Plant Manager

The above line of succession does not preclude higher level management from assuming the role of Emergency Director (ED)in any circumstance which, in the judgment of the manager, is appropriate or necessary to protect the health and safety of the public. This designation also does not relieve higher level management from the responsibility to be aware of those circumstances that may initiate this action. These individuals will be trained as EDs.

b. TSC Manager

The on-call TSC Manager reports to the Technical Support Center (TSC) and is responsible for implementing FNP-0-EIP-6, "TSC Setup and Activation", assisting the ED with classification assessment and emergency plan implementation per NMP-EP-110, “Emergency Classification Determination and Initial Action” and coordination of communications between the TSC and other locations per NMP-EP-111, “Emergency Notifications “.

c. Operations Supervisor

The on-call Operations Supervisor reports to the Technical Support Center (TSC) and is responsible for coordinating the efforts of the operating crew, advising the ED on emergency operations and facilitating communications between the ED and Shift Supervisor. Supervisory personnel designated by the Plant Manager and holding a Senior Reactor Operator License rotate as the on-call Operations Supervisor.

d. Maintenance Supervisor

The on-call Maintenance Supervisor reports to the TSC and is responsible for implementing FNP-0-EIP-5, "Maintenance Support to the Emergency Plan", including coordination of the efforts of Emergency Repair Parties and advising the ED on proposed modifications, alterations or repair to plant systems and on specifics of plant systems and equipment. Supervisory I&C and Maintenance personnel designated by the Plant Manager rotate as the on-call Maintenance Supervisor.

e. Health Physics Supervisor

The Health Physics Supervisor reports to the TSC and is responsible for implementation of FNP-0-EIP-4, "Health Physics Support to the Emergency Plan", including coordination of the efforts of in-plant Field Monitoring Teams, decontamination activities, Health Physics and ALARA support, and advising the ED on the status of onsite and offsite radiation protection activities. This individual is also responsible for coordination of out-of-plant and SNC offsite Field Monitoring Teams until relieved by the Emergency Operations Facility (EOF) staff. The Health Physics Supervisor and other supervisory personnel designated by the Plant Manager and, to the maximum extent possible, meeting the requirements of Regulatory Guide 1.8, September 1975, rotate as the on-call Health Physics Supervisor.

f. Security

Security supervision is responsible for implementing FNP-0-EIP-7, "Security Support to the Emergency Plan", maintaining site security and advising the ED.

g. Engineering Supervisor

The on-call Engineering Supervisor provides engineering expertise for advising the ED in the developement of plans for modifications, alterations, or repairs to plant systems. The on-call Engineering Supervisor is responsible for assisting the on-call Maintenance Supervisor with plant repair and mitigation activities by coordinating the necessary engineering resources.

h. Chemistry Supervisor

The on-call Chemistry Supervisor reports to the TSC and is responsible for implementation of FNP-0-EIP-20, “Chemistry and Environmental Support to the Emergency Plan” including coordination of offsite dose projections and in plant sampling. The on-call Chemistry Supervisor is responsible for coordinating offsite dose projections until relieved by the Emergency Operations Facility (EOF) staff.

i. Emergency Notification Network (ENN) Communicator

The on-call ENN Communicator reports to the TSC and is responsible for communications with the state and local government agencies using the guidance found in NMP-EP-111, “Emergency Notifications “.

j. Emergency Notification System (ENS) Communicator

The on-call ENS Communicator reports to the TSC and is responsible for communications with the Nuclear Regulatory Commission (NRC) using the guidance found in NMP-EP-111, “Emergency Notifications “.

k. Shift Manager

The Shift Manager is responsible for directing operational activities to classify and combat the emergency as delineated in NMP-EP-110, “Emergency Classification Determination and Initial Action". The Shift Manager acts as the Emergency Director (ED) until relieved by the on-call ED and until relieved has the authority and responsibility to immediately and unilaterally initiate any necessary emergency actions, including providing protective action recommendations to authorities responsible for implementing offsite emergency measures.

l. Emergency Repair Party

The Emergency Repair Party, as shown in Figure 2, is a group of personnel competent in operations and repair work who will be used during an emergency situation to make temporary repairs to systems/components in order to mitigate the effects of the emergency. An Emergency Repair Party for initial re-entry and repair will consist of individuals as required from the following personnel groups:

Operations Personnel
Maintenance Personnel
Instrumentation and Control Personnel
Health Physics Personnel
Chemistry Personnel

m. Field Monitoring Team (FMT)

The Field Monitoring Teams, as shown in Figure 2, consisting of permanent plant employees and/or qualified vendor personnel, will perform onsite and offsite monitoring. They will provide radiation protection support at the Southeast Alabama Medical Center, during transport of potentially irradiated and/or contaminated casualties, and at the Assembly Areas, and at any other location onsite or offsite as instructed by the Emergency Director (ED) or EOF Manager.

To perform these functions a number of teams will be designated consisting of a Team Leader and an Assistant.

Team Leader - A Health Physics Technician or qualified vendor technician.
Assistant - Any qualified plant employee or vendor personnel.

n. Dose Assessment Staff

The Shift Supervisor is responsible for offsite dose projections until relieved by the Technical Support Center (TSC) staff. Personnel reporting to the Chemistry Supervisor are responsible for making dose projections until the Emergency Operations Facility (EOF) is activated, at which time EOF dose assessment personnel become responsible for making offsite dose projections. These projections may initially be made automatically by a computerized dose projection program described in FNP-0-M-007, Emergency Dose Calculation Manual using guidance found in FNP-0-EIP-9.1, "Automated Dose Assessment Method". A manual personal computer methodology is provided in NMP-EP-104, "Dose Assessment" for long term dose assessment or in the event that the automatic computerized system is inoperable. Normally, dose projections are transmitted to appropriate state authorities by telecopy, commercial telephone, the Emergency Notification Network (ENN), or by posting dose projections on the SNC Integrated Data Display System. The Emergency Notification System (ENS), Health Physics Network (HPN), and commercial telephone lines are available for transmission of dose assessment data to the NRC. Data will be provided as directed by the NRC at the time of need.

o. Additional Plant Staff Assignments

1) Operations Support Center (OSC) Manager

The OSC Manager will be considered to be the senior individual in the OSC and will report to the Maintenance Supervisor. The OSC Manager will take the lead in coordinating the activities of the OSC or other location directed by the Emergency Director per FNP-0-EIP-5.0. The senior individual at each of the Assembly Areas will become the supervisor at that location. The Assembly Area senior individual will take the lead in coordinating the activities of the Assembly Area in support of OSC operations as directed by the OSC Manager.

2) Radiological monitoring

The Health Physics Group is responsible for all aspects of applied health physics. Emergency monitoring will be provided by a Health Physics Technician on shift, a qualified/trained vendor technician, or qualified member of the plant staff. Health Physics supervision will be responsible for relocation of access control to both units as necessary, and for implementing procedures for handling highly radioactive samples.

3) Fire Fighting and Rescue

The plant fire brigade and rescue team on all shifts will be composed of personnel described in NMP-ES-035-010. The fire brigade will be directed by the Fire Brigade Chief with the aid of FNP-0-EIP-13.

4) First Aid

At least one person on each shift will be qualified to perform first aid.

5) Decontamination

Personnel decontamination is the responsibility of the Health Physics Group and during an emergency the responsibility of the Field Monitoring Team.

Area and equipment decontamination onsite as the result of an accident will be a joint effort of personnel from the Operations, Maintenance, Chemistry and Health Physics Groups.

6) Personnel Accountability

Personnel accountability is the responsibility of each plant supervisor or senior individual onsite in the group. That is, each supervisor is responsible for accounting for each person onsite in his group or visiting his group. Details for personnel accountability are provided by FNP-0-EIP-10, "Evacuation, Personnel Accountability, and Site Dismissal". Information pertinent to personnel accountability will be kept by security guards at each access control point.

7) Record Keeping

A record of all significant events that occur will be kept by the operating crew in the Plant Operator's Logbook. A log will be kept by a designated plant staff member who will be responsible for maintaining communications with the corporate headquarters, and offsite authorities as directed by the Emergency Director. Radiological information such as radiological survey data, personnel exposures, decontamination activities and information from onsite groups will be maintained by the Health Physics Supervisor.

8) Communications

Responsibility for initial offsite communications will be handled by the Shift Supervisor or Emergency Director. After the emergency organization is activated, designated plant staff member(s) may be assigned to maintain communications with the Emergency Operations Facility (EOF)and with offsite authorities. If the Emergency Director is not located in the control room he may maintain communications with the control room through an assigned individual. When the Emergency Operations Facility (EOF) is activated, the EOF staff may handle communication with offsite authorities. Communications interfaces are shown in Figure 3.

B. OFFSITE

The normal Alabama Power Company (APC) offsite company organization is shown in Figure 5. The normal Southern Nuclear Company Corporate organization and its relationship to the onsite organization is shown in Figure 6. The Emergency Communication Organization is shown and described in the Emergency Communications Plan in Appendix 10(J).

The offsite emergency organizations and their duties and responsibilities are described below:

1. Emergency Operations Facility (EOF)

   The Emergency Operations Facility (EOF) Emergency Response Organization (ERO) and its relationship to the Technical Support Center (TSC) emergency organization is described in Appendix 7(G).

2. Corporate Organization

   In the event of an emergency condition at FNP that requires activation of the Corporate Emergency Response Organization (ERO) the organization will be activated to notify Emergency Organization personnel and to provide corporate support from SNC.

   a. Corporate Duty Manager

      The Duty Manager is responsible for the overall management of emergency support at FNP. The Duty Manager is the primary contact for support from off-site agencies, and provides assistance, and advice to the EOF Manager and Emergency Director in decisions involving the overall effect of the event. The Duty Manager will serve as the corporate spokesperson until such time as an alternate Duty Manager or other trained individual is available to assume the role of spokesperson. This position will be filled by a qualified individual designated by the Executive Vice President.

3. Emergency Communication Organization

   The Emergency Communication Organization (ECO) is discussed in Appendix 10(J).

4. Recovery Phase Organization

Upon termination of the emergency condition and at the discretion of the Emergency Director, the SNC Emergency Organization will shift to the Recovery Phase Organization shown in Figure 10. The Recovery Manager has authority to modify the organization as deemed necessary.

Responsibilities and authorities are:

a. Recovery Manager

The Recovery Manager shall direct the overall recovery effort.
He has the full authority and responsibility to make decisions regarding plant recovery and return to operation. This position will be filled by the Vice President – Nuclear Plant Site or designee.

b. Recovery Support Director

The Recovery Support Director is responsible for all administrative aspects of recovery activity. The line of succession for the Recovery Support Director shall be designated by the Vice President –Nuclear Plant Site, should the Recovery Organization be required.

c. Technical Support Director

The Technical Support Director is responsible for managing all supplemental engineering, technical and licensing support resources needed in the recovery effort. The line of succession for the Technical Support Director shall be designated by the Vice President – Nuclear Plant Site, should the Recovery Organization be required.

d. Recovery Support Supervisor

The Recovery Support Supervisor is responsible for coordinating or monitoring operational support recovery activities as directed by the Recovery Support Director. This position will be filled by a qualified individual designated by the Recovery Support Director.

e. Administrative Support Supervisor

The Administrative Support Supervisor is responsible for supervising EOF recovery phase administrative activities including:

1) Special communications needs

2) Manpower augmentation

3) Personnel Affairs for temporarily assigned personnel

4) Special Budget Activities

5) Clerical Support

6) Other activities as assigned by the Recovery Support Director

This position will be filled by a qualified individual designated by the Recovery Support Director.

f. Engineering Supervisor

The Engineering Supervisor is responsible for offsite engineering resources directed toward design modification, major repair and engineering evaluations associated with recovery and return to operation. Responsibilities include:

1) Coordination of offsite engineering and technical support for design changes and repairs

2) Interfacing with Architect/Engineering firms for detailed technical support

3) Interfacing with NSSS supplier for detailed analyses and technical support

4) Coordinating and expediting procurement activities.

This position will be filled by a qualified individual designated by the Technical Support Director.

g. Licensing Supervisor

The Licensing Supervisor is responsible for all recovery phase licensing activities. His responsibilities include:

1) Interfacing with the NRC to resolve license issues

2) Interfacing with Architect/Engineer firms or NSSS supplier to obtain technical and engineering analyses as necessary to resolve licensing issues

3) Coordinating with the Engineering Supervisor on design changes resulting from licensing issue resolution

4) Preparation of NRC required reports associated with the accident or recovery effort.

This position will be filled by a qualified individual designated by the Technical Support Director.

C. OUTSIDE ORGANIZATIONS

Coordination with Governmental agencies is discussed in Appendix 7(G), section E. The following provides additional site specific details to the Appendix 7(G) discussion.

1. Government Agencies

The Nuclear Regulatory Commission has published its incident response plan in NUREG-0728, specifying NRC

actions, responsibilities, functions and authorities during an emergency. Written agreements have been reached with the other offsite agencies listed below with regard to the type of support that will be furnished to the Joseph M. Farley Nuclear Plant in the event of an emergency. These agreements have been developed to ensure that there is a clear understanding of assigned responsibilities and that there will be proper coordination of activities in the event of an emergency. Letters of Agreement on File with offsite support groups are given in Part I, Appendix 2(B).

Corporate and/or plant personnel will be dispatched to principal government agencies on an as needed basis.

Anticipated offsite federal assistance is discussed in the individual state plans.

a. Department of Energy Savannah River Operations Office

In the event of a General Emergency, the DOE Savannah River Operations Office has agreed to provide a DOE Radiological Assistance Team. This assistance team will be limited to advisory assistance in handling radiological emergencies. The Emergency Director is authorized to request this assistance.

b. Nuclear Regulatory Commission

Upon notification of an emergency condition, the NRC will implement the incident response plan described in NUREG-0728. In addition to fulfilling its regulatory responsibilities, it is expected that the NRC will provide technical assistance and recommendations. For Site Area and General Emergencies, dispatch to SNC facilities of a NRC Region II site team is anticipated with arrival expected 2 to 6 hours following notification. As described in Section III, office space, telephones, etc. have been provided for NRC personnel at the Technical Support Center and Emergency Operations Facility.

c. State of Alabama

The Alabama Radiation Control Division of the State of Alabama Department of Public Health is responsible for initiating the "Alabama Radiological Response Plan for Nuclear Power Plants" in support of an emergency at the Farley Nuclear Plant. This plan provides a detailed description of the notification procedures and responsibilities and duties of the local and state agencies involved. Since the primary concern of the Alabama Radiation Control Division is for the welfare and safety of the general public, they will have primary responsibility and authority for handling the offsite aspects of the emergency in Alabama.

An agreement is in place with the State of Alabama to provide available resources and equipment to support the mitigation and response to an emergency at Plant Farley to include Hostile Action Based events. These resources include, but are not limited to, Local Law Enforcement Agency (LLEA) assets, Fire Fighting assets, medical support resources (including transportation), and coordination through an Incident Command Post. Requests for offsite resources and equipment will be communicated from the control room to the Houston County 911 center, the county EOC, or through the Incident Command Post, as applicable, based on the nature and timing of the event.

d. State of Georgia

Upon notification of an emergency condition, the Georgia Emergency Management Agency will implement the "State of Georgia Radiological Emergency Plan". The Georgia Emergency Management Agency has the authority and responsibility for coordinating the efforts of local and state agencies in Georgia to provide for the health and safety of the general public in the event of a radiological incident.

An agreement is in place with the State of Georgia to provide available resources and equipment to support the mitigation and response to an emergency at Plant Farley to include Hostile Action Based events. These resources include, but are not limited to, Local Law Enforcement Agency (LLEA) assets, Fire Fighting assets, medical support resources (including transportation), and coordination through an Incident Command Post. Requests for offsite resources and equipment will be communicated from the control room to the Early County 911 center, the county EOC, or through the Incident Command Post, as applicable, based on the nature and timing of the event.

e. State of Florida

Upon notification of an emergency condition by SNC or the Alabama Emergency Management Agency, the Florida Department of Community Affairs, Division of Emergency Management, State Warning Point will implement the "State of Florida Radiological Emergency Management Plan for Nuclear Power Plants". The Department of Community Affairs, Division of Emergency Management has the authority and responsibility for coordinating the efforts of local and state agencies in Florida to provide for the health and safety of the general public in the event of a radiological incident. The Department of Health-Bureau of Radiation Control will provide support to the Company in matters related to the Florida ingestion pathway radiological emergency response.

f. Houston County, Alabama

The Chairman of the Houston County Commission has the overall responsibility for emergency preparedness and local response in Houston County. Houston County has also accepted responsibility for evacuations in Henry County out to the 10 mile EPZ. The Houston County Emergency Management Agency coordinates planning and operations of all local agencies in support of an incident at Farley Nuclear Plant. A detailed emergency plan is maintained in case of an emergency at the Farley Nuclear Plant. This plan is Part I of the "Alabama Radiological Response Plan for Nuclear Power Plants".

An agreement is in place with Houston County, Alabama to provide available resources and equipment to support the mitigation and response to an emergency at Plant Farley to include Hostile Action Based events. These resources include, but are not limited to, Local Law Enforcement Agency (LLEA) assets, Fire Fighting assets, medical support resources (including transportation), and coordination through an Incident Command Post. Requests for offsite resources and equipment will be communicated from the control room to the Houston County 911 center, the county EOC, or through the Incident Command Post, as applicable, based on the nature and timing of the event.

g. Early County, Georgia

The Chairman, Early County Board of Commissioners, has responsibility for overall radiological emergency response planning. The actual plan development and coordination of emergency actions is carried out by the Blakely-Early County Emergency Management Agency. The "Blakely-Early County Emergency Management Agency Radiological Emergency Plan for Nuclear Incidents/Accidents Involving Joseph M. Farley Nuclear Power Plant" is given as part of the "State of Georgia Radiological Emergency Plan".

An agreement is in place with Early County, Georgia, to provide available resources and equipment to support the mitigation and response to an emergency at Plant Farley to include Hostile Action Based events. These resources include, but are not limited to, Local Law Enforcement Agency (LLEA) assets, Fire Fighting assets, medical support resources (including transportation), and coordination through an Incident Command Post. Requests for offsite resources and equipment will be communicated from the control room to the Houston County 911 center, the county EOC, or through the Incident Command Post, as applicable, based on the nature and timing of the event.

h. City of Dothan, Alabama - Fire Department

In the event an emergency (Section IV) is declared as a result of a fire at Farley Nuclear Plant, the Dothan Fire Department has agreed to provide support to help combat the fire. The Dothan Fire Department resources are listed in FNP-0-EIP-13, "Fire Emergencies". The estimated response time to Farley Nuclear Plant is 30 minutes. The Emergency Director is authorized to request this assistance. Request for fire support will be made by the control room or site security to the Houston County 911 center, Houston County EOC, or the Incident Command Post, as applicable, based on the nature and timing of the event.

2. Contractor and Private Offsite Organizations

a. Southern Nuclear/Southern Company Services

Southern Company Services, Incorporated (SCS), an affiliated service company, served as the original architect-engineer. As a result of the consolidation of SCS and SNC nuclear expertise, and in addition to being the licensee, SNC also serves as its own architect-engineer and performs functions previously performed by SCS to include design, licensing, and fuel management support during normal operation.

b. Bechtel Power Corporation

Bechtel is the architect/engineer for portions of Unit 1 and for Unit 2. Bechtel provides support in the areas of new concept design (including drawings, specifications, safety reviews, etc.); modification design; engineering support for licensing issues; and as advisor on component and system operation. The Engineering Support Manager (Emergency Support Phase) and the Technical Support Director (Recovery Phase) interface directly with Bechtel.

c. Westinghouse

Westinghouse is the NSSS supplier for both Farley units. Their support activities associated with the NSSS include installation, testing, and corrective action assistance in their scope of supply; engineering support for licensing issues; new concepts design and modification design; advisor on components and systems; and engineering support related to operation, maintenance, and corrective action. The Engineering Support Manager (Emergency Support Phase) and the Technical Support Director (Recovery Phase) provide interface with Westinghouse either directly or through SCSI.

d. Institute of Nuclear Power Operations (INPO), Nuclear Energy Institute (NEI)and Electric Power Research Institute (EPRI).

   Southern Nuclear Operating Company is a participating member of INPO and as such will have available technical expertise from this organization in areas of nuclear power plant operation in accordance with established agreements (Letter of Agreement - Appendix 2(B)). Also, INPO and EPRI have a plan describing their combined emergency information response capabilities. Their assistance is available to Southern Nuclear Operating Company (Letter of Agreement - Appendix 2(B)).

e. Maintenance Assistance

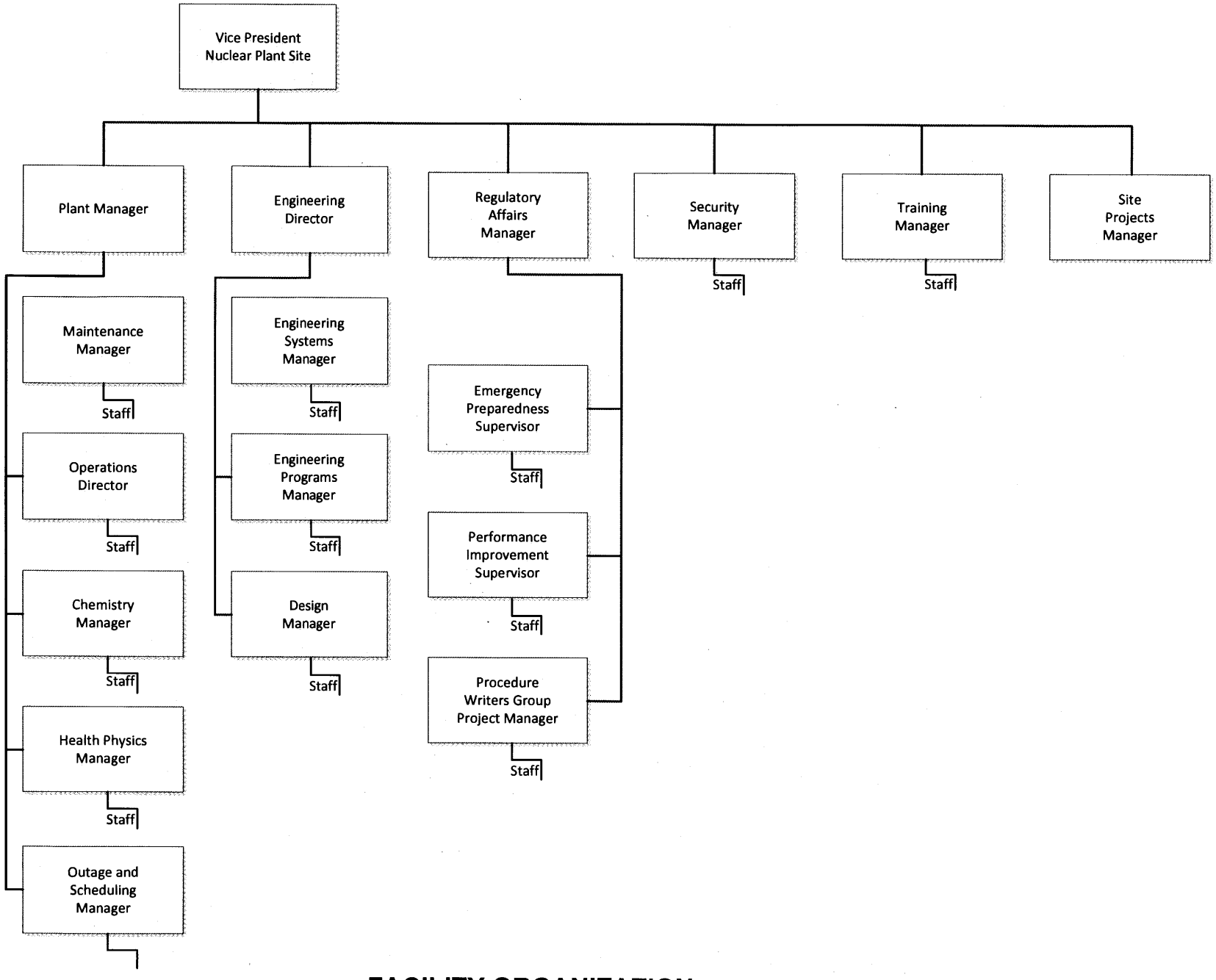
   Assistance in the area of maintenance and repair is made available by contractor organizations.

f. Radiological Monitoring Assistance.

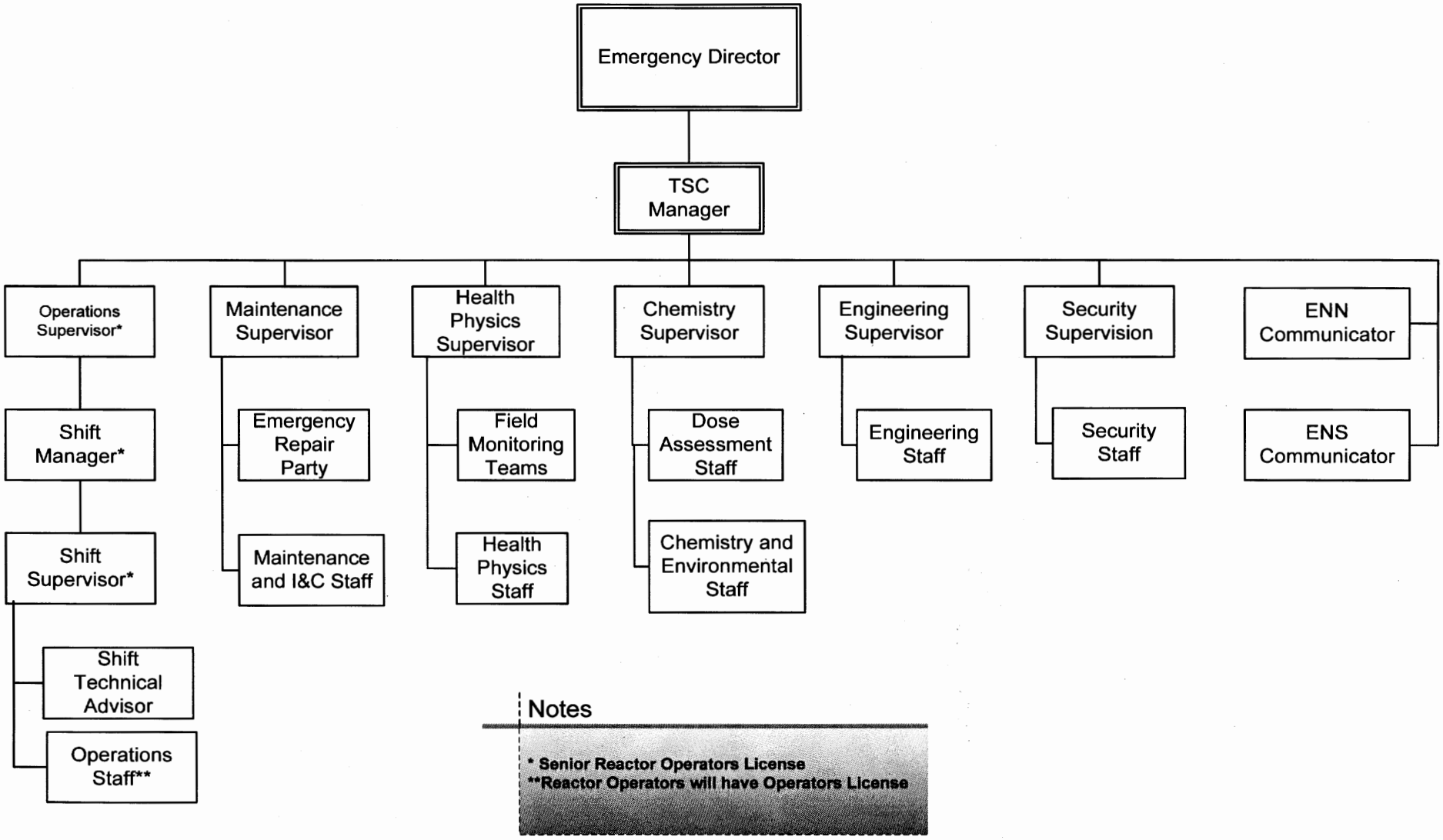
   Radiological monitoring in the plant and in the environs both onsite and offsite will be augmented by outside vendors
   as necessary. Initial radiological monitoring will be performed by available Southern Company resources, (e.g., Georgia Power Company (GPC) Central Laboratory).

g. Other Utilities

   Southern Nuclear Operating Company is a signatory to the "Voluntary Assistance Agreement By and Among Electric Utilities Involved in Transportation of Nuclear Materials" and a signatory to the "Nuclear Power Plant Emergency Response Voluntary Assistance Agreement" (see Appendix 2(B)). Although these agreements do not impose an obligation on any signatory to provide assistance, they establish the contractual framework by which assistance may be requested and provided expeditiously.

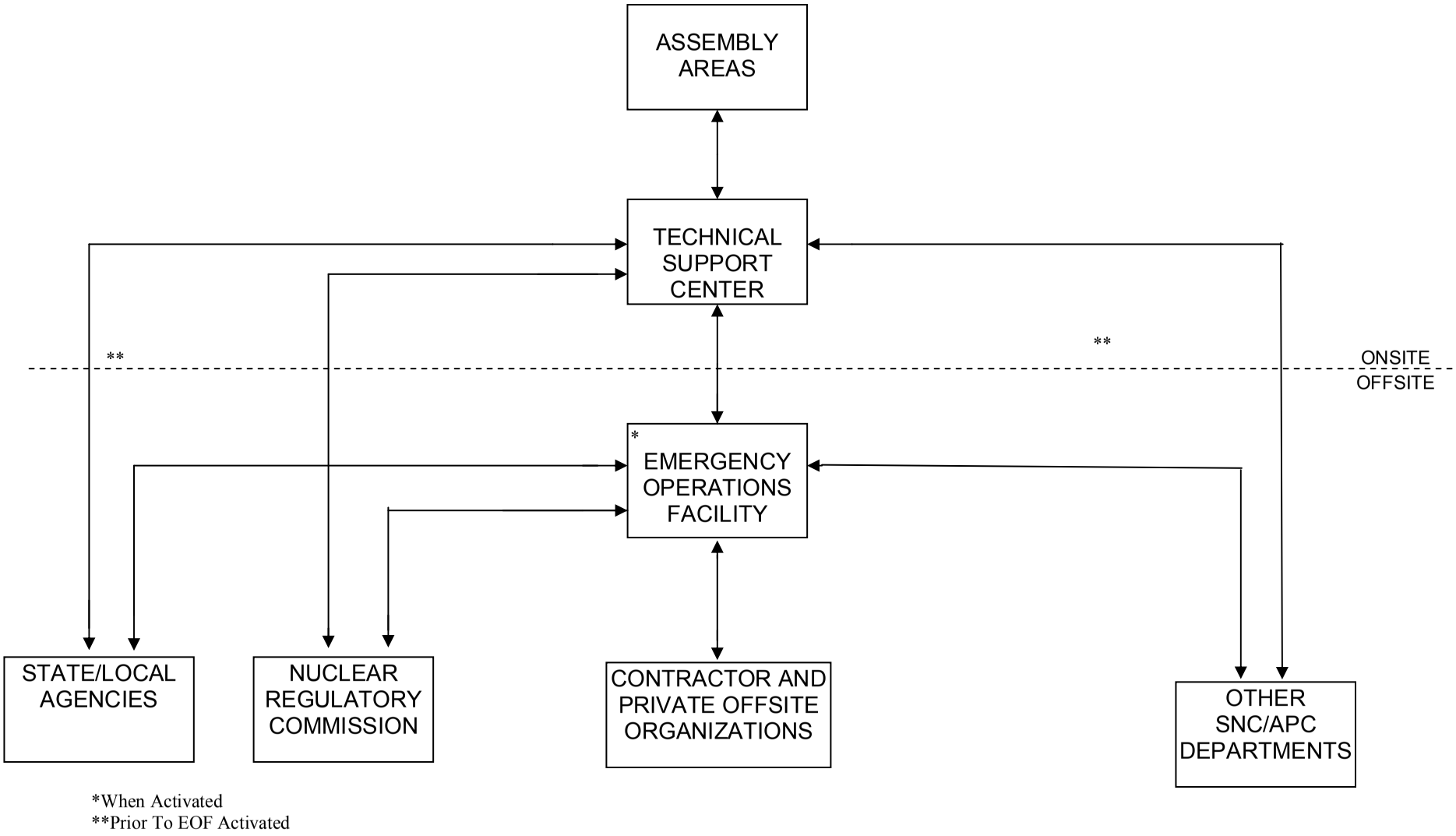


FACILITY ORGANIZATION
Figure 1



TECHNICAL SUPPORT CENTER EMERGENCY RESPONSE ORGANIZATION

Figure 2

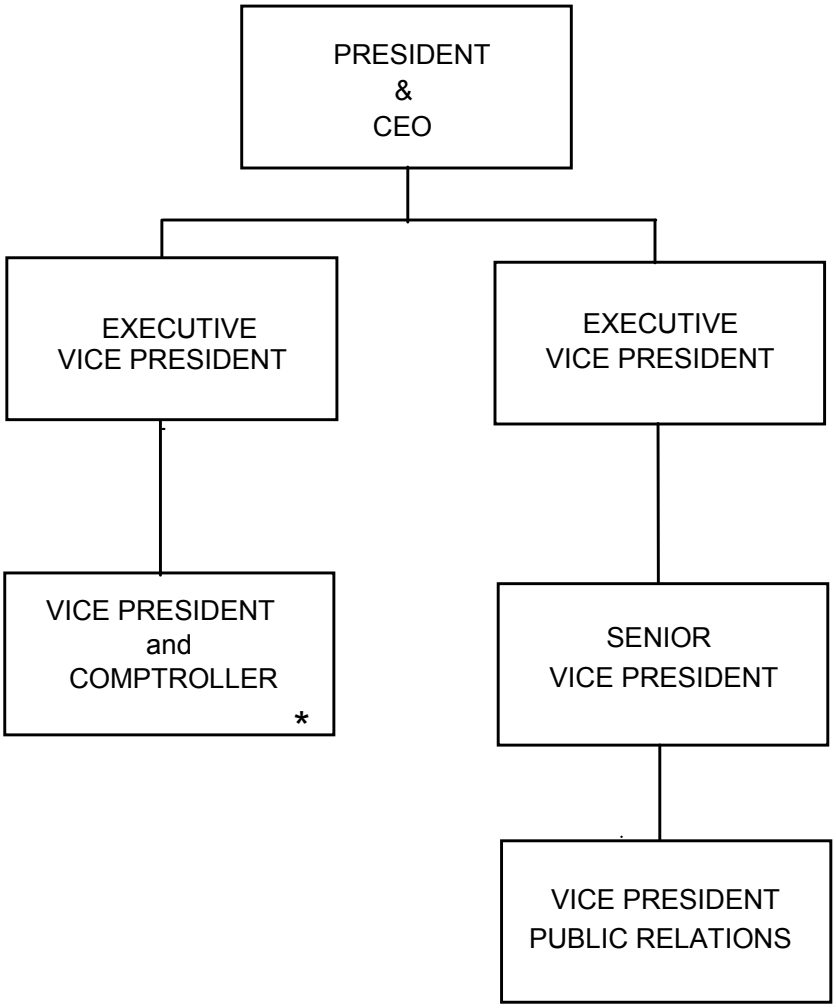


*When Activated
**Prior To EOF Activated

COMMUNICATIONS INTERFACES
Figure 3

DELETED

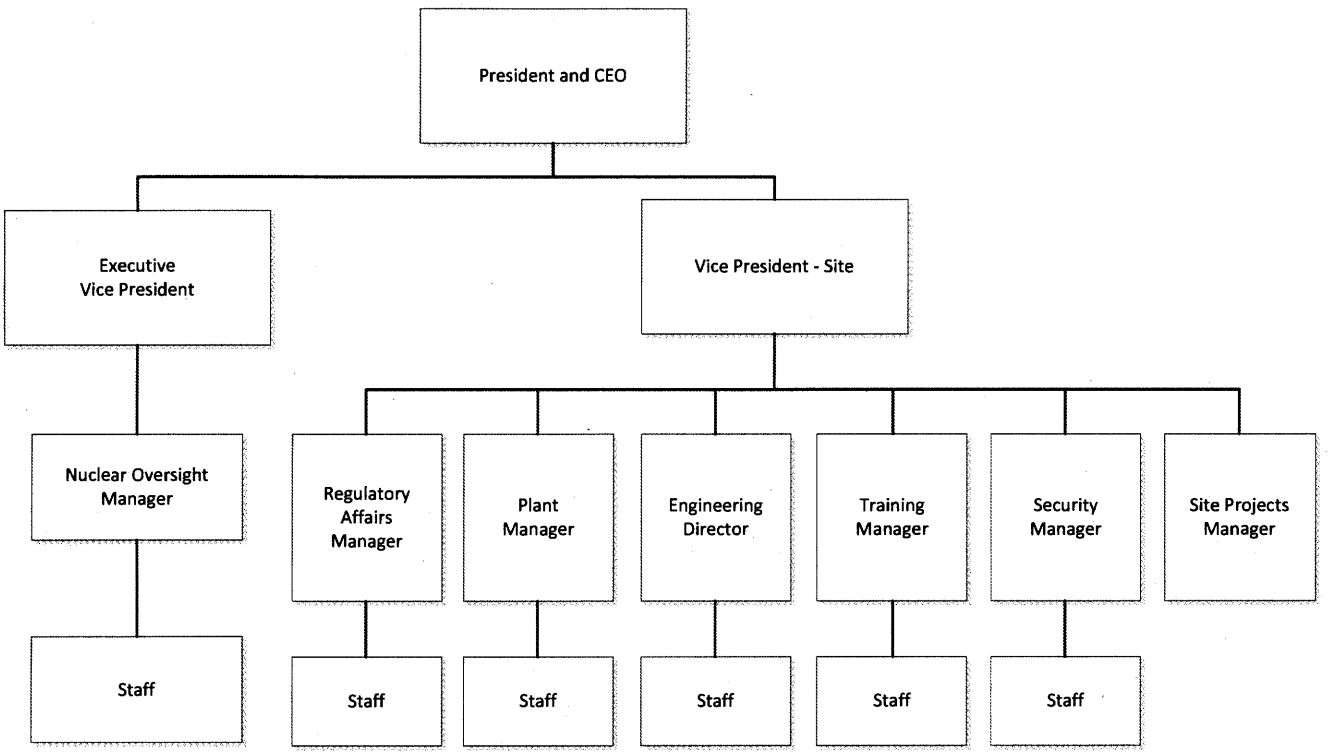
Figure 4



* - Executive Point Of Contact

APC NORMAL OFFSITE CORPORATE ORGANIZATION

FIGURE 5



FARLEY NORMAL ORGANIZATION

FIGURE 6

DELETED

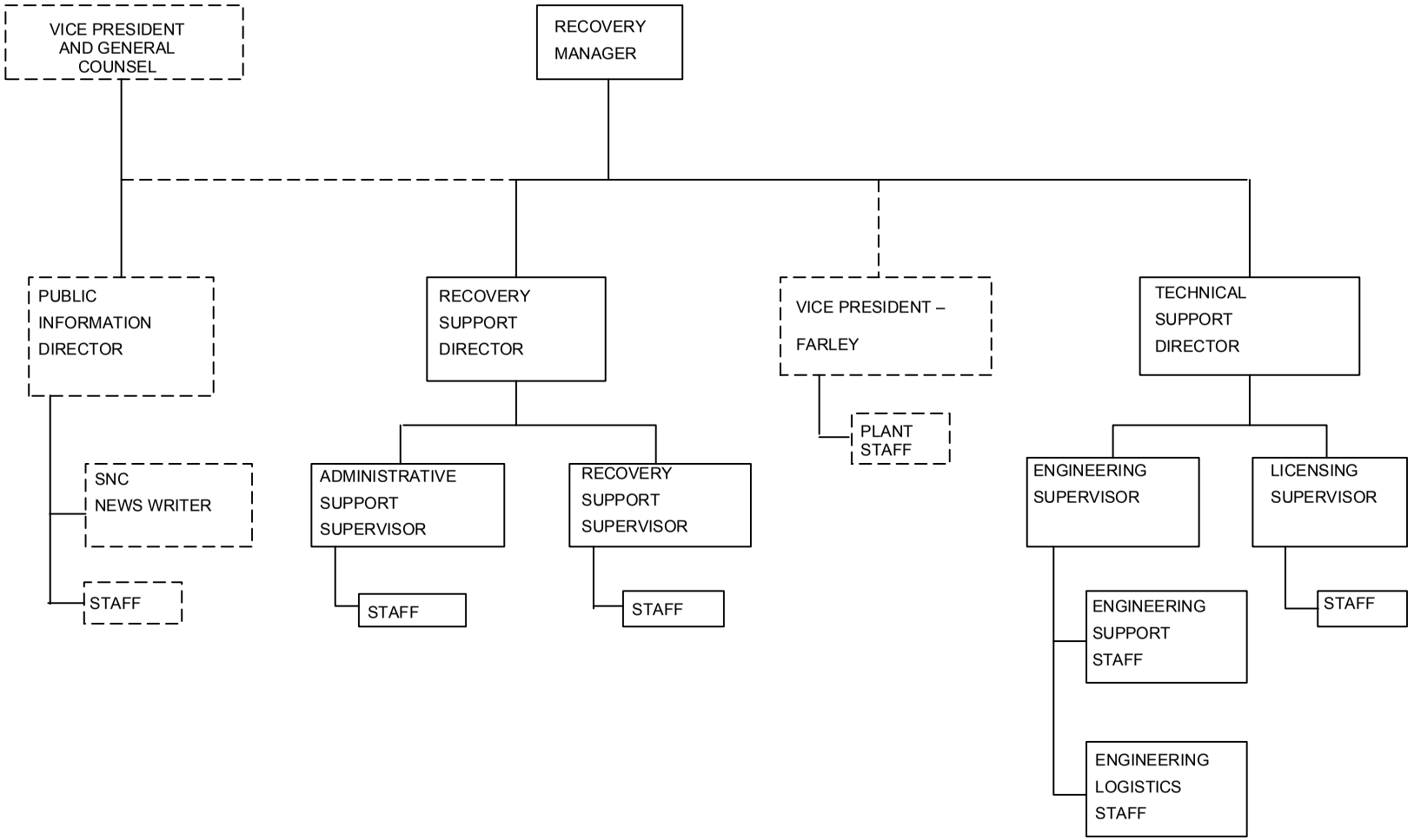
Figure 7

DELETED

FIGURE 8

DELETED

Figure 9

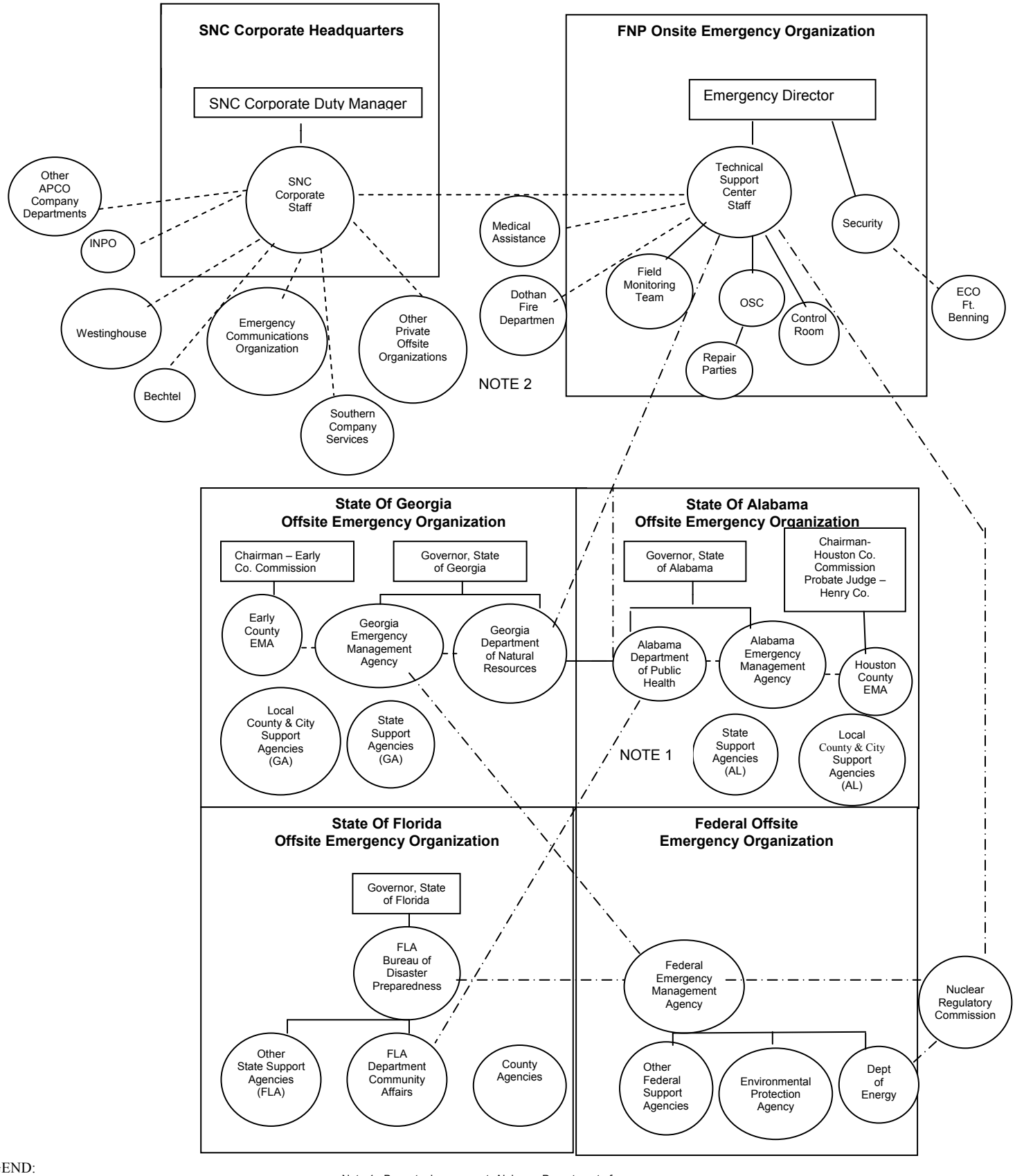


EMERGENCY OPERATIONS FACILITY RECOVERY ORGANIZATION

Figure 10

DELETED

Figure 11



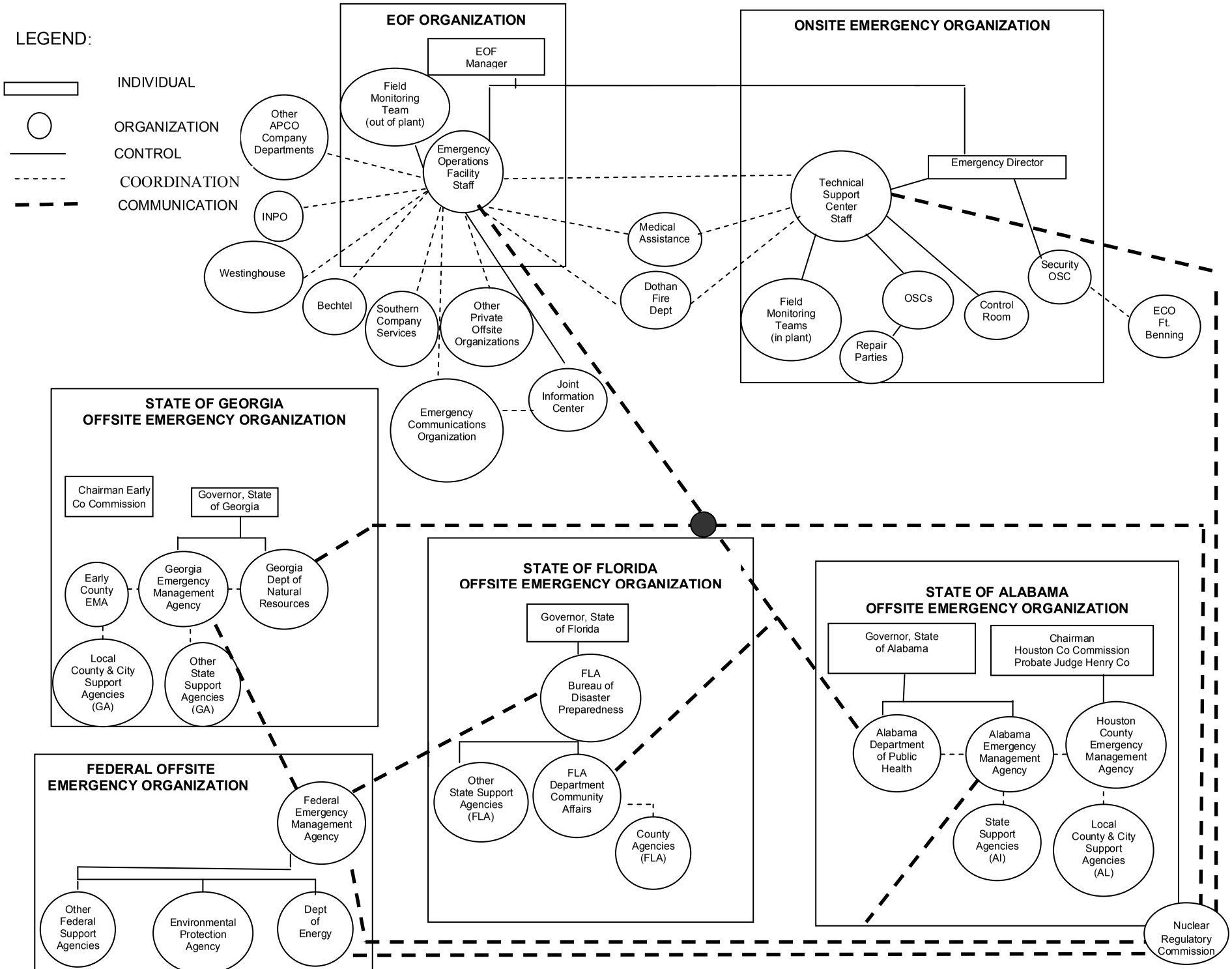
LEGEND:

- Individual
- Organization
- Control
- Coordination
- Communication

Note 1: By mutual agreement, Alabama Department of Public Health communicates with Fla. Department of Community affairs (see V.I.A.). If appropriate, communication will be made directly to all ENN locations (see 11.B.11)

Note 2: Onsite emergency organization will communicate directly with private support organizations if deemed necessary by Emergency Director.

ORGANIZATONAL RELATIONSHIP PRIOR TO EOF ACTIVATION
Figure 12



ORGANIZATIONAL RELATIONSHIP FOLLOWING EOF ACTIVATION

Figure 13

III. FACILITIES AND EQUIPMENT

A. CONTROL CENTERS

Principal Southern Nuclear Operating Company emergency facilities and their functions are described individually below. Figures 12 and 13 illustrate the interfaces between the functional activities associated with each facility and state, local, federal, and private organizations.

1. Technical Support Center (TSC)

During any emergency condition the center for coordinating all in-plant activities will be the TSC.

Located immediately north of the Unit 2 control room area, the TSC is designed to accommodate up to 25 people for the evaluation of plant status, coordination of damage assessment and emergency actions, and interface with the NRC, Emergency Operations Facility (EOF) and Operations Support Center (OSC). Provision is also made for control and coordination of communications with offsite agencies and of out-of-plant radiation monitoring activities until the EOF is activated and assumes these functions. The TSC when activated will normally maintain the function of offsite communications for initial and upgrade notifications to federal, state, and local authorities. An overall space of 22 feet x 65 feet, with a 9-foot ceiling height, has been provided. Room layout is as follows:

a. Monitoring Area - Two dedicated Integrated Plant Computer (IPC) terminals are provided for the TSC staff to obtain detailed operational information from either the Unit 1 or Unit 2 IPC to include various plant parameters, radiological data, meteorological data and automated dose assessment as well as providing the ability to activate ERDS. In addition to the dedicated IPC terminals the monitoring area includes numerous LAN based personal computers which can also provide the TSC staff with Unit 1 or Unit 2 IPC access as well as providing access to the web based manual dose assessment program.

b. Planning and Coordination Area - Includes desks, reference tables, and files for plant procedures and manuals. Phones are provided for full communication capability. Two tables and FTS communication systems are designated for NRC use.

c. Document Room - Includes files, drawings, data sheets, and indexes.

d. Conference Area - Includes a conference table and information displays. Communications cabinets contain two-way radio, telephone, Emergency Notification Network and NRC Emergency Notification System/NRC HPN phone facilities. An intercom, sound powered headphones and a telecopier are also provided.

Figure 14 shows the above layout.

The TSC is designed to be habitable to the same extent as the control room for postulated radiological accidents. Its ventilation system includes a deep-bed charcoal filter to remove air-borne contamination, and it has the capability of pressurizing the TSC area and recirculating the room air through the charcoal filter. A permanent radiation monitor is provided to continuously indicate radiation dose rates and airborne activity. A radiation alarm in the main control room make-up air supply duct automatically initiates room pressurization and recirculation. Electrical power sources are such that the HVAC, wall outlets and lighting can be powered from the diesel generators if offsite power is lost.

The TSC contains a set of piping and instrumentation drawings for each unit and technical manuals on selected major equipment. Other technical data are readily available from the document control facility in the plant Service Building which may be reached by intra-plant phone from the TSC. Also available in the TSC are the Emergency Plan, Emergency Plan Implementing Procedures, Abnormal Operating Procedures, Emergency Response Procedures, Severe Accident Management Guidelines, and Unit Operating Procedures along with other general reference material. Should the emergency situation so dictate, the Emergency Director may shift the staff to other locations as designated by the Emergency Director.

2. Emergency Operations Facility (EOF)

The EOF facilities and equipment are described in Appendix 7(G).

This page intentionally blank

3. NRC Support Facilities

Support facilities for the NRC have been provided at the Site Training Facility. Adequate functional working space and telecommunication capability for up to 10 people (approximately 750 ft^2) has been provided in this near-site facility.

4. Operations Support Center (OSC)

The Breakroom (outside the Technical Support Center) will serve as the Operations Support Center (Figure 19), from which emergency operations support will be provided. In the event that the Operations Support Center becomes untenable, it will be relocated onsite or to offsite company facilities in Headland, Alabama (Figure 17) at the discretion of the Emergency Director.

5. Alternative Facility

During a security related event or other event that precludes onsite access, the TSC and OSC ERO staff will be directed to an alternative facility. This facility is located in the Alabama Power Company (APC) Old Crew Headquarters Building in Headland, Alabama. The alternative facility is equipped with the necessary communications and data links to support communications with the control room, site security, and the EOF. The available communications and data links also provide access to SNC document management resources, work planning resources, plant technical data displays, and other SNC specific resources for performing engineering assessment activities, including damage control team planning and preparation for return to the site. Procedural guidance for the alternative facility is provided in NMP-EP-135, Alternative Facility Setup and Operation.

5. Joint Information Center

The Houston County Juvenile Court Services Building (Figure 17) will serve as a working and briefing center for local, state and national news media (Lease Agreement – Appendix 2(B)). All official information released by SNC and APC regarding the emergency will be released from the Joint Information Center once it has been activated.

6. APC Corporate Media Center (CMC)

The APC Corporate Media Center will be staffed by the Emergency Communication Organization and serve as the coordination point for APC corporate public information support.

B. COMMUNICATIONS SYSTEMS

Several modes of communication are available, during both normal and emergency conditions, to transmit and receive information within the plant and at locations onsite and offsite.

1. Commercial Telephones

The commercial telephone lines consist of several lines connected through local exchanges to the Bell Telephone system. Access to these lines is available through selected private automatic exchange (PAX) telephones located throughout the plant, including the control room, TSC, and Joint Information Center. Commercial telephone lines servicing the Corporate Office may be accessed through off-premises extensions (OPX) of the Corporate Office PAX which are located in selected plant locations, including the TSC, and in the EOF. Availability of OPX and PAX telephones capable of accessing commercial telephone lines is tabulated in Table 1 Commercial telephone.

lines are also available at the Birmingham EOF and the Birmingham Corporate Communication Offices. A facility minimum of thirty (30) commercial telephone lines are available at the Joint Information Center.

2. Private Automatic Exchange

The plant private automatic exchange (PAX) consists of a network of telephones located strategically throughout the plant, at various stations on the site (including the Control Room, TSC and OSC) and at selected offsite locations Joint Information Center, the State of Alabama Forward Emergency Operations Center in Houston County, the State of Georgia Forward Emergency Operations Center in Early County, the AEMA EOC in Clanton, Alabama, the ARCD EOC in Montgomery, Alabama, and the GEMA EOC in Atlanta, Georgia. Selected PAX phones are capable of communication with similar private automatic exchanges at the Corporate Office, other APC/SNC facilities, and facilities of Southern Company affiliates (e.g. Southern Company Services and Georgia Power Company).

In addition to the PAX network, selected phones operate as off-premises extensions (OPX) of the APC Corporate Headquarters private automatic exchange and operate independently of the plant PAX system. These phones may be used for calling APC/SNC facilities and offices connected to the APC Corporate Headquarters PAX system or for accessing Bell Telephone System commercial lines in Birmingham. OPX and PAX phone availability is tabulated in Table 1.

3. Microwave

APC's microwave system provides telephone circuits to all of the company's power plants and major offices including the Alabama Power Office in Headland, Alabama. All primary microwave routes are provided with standby RF equipment with automatic switchover. The microwave telephone circuits available may be used by dialing through the PAX system.

4. Alabama Control Center (ACC) Link

A computer link to the Alabama Control Center network is located in the Switchhouse. The link provides for communications with the ACC for purposes of load dispatch and coordination with the Southern Company Power Control Center and other APC plants.

5. Two-Way Radio

Two-way radios and base stations are available at the site as follows:

a. Plant operations frequency -

This radio frequency provides communication between the Control Room, TSC, EOF, and personnel in the plant equipped with operations frequency radios. This frequency may be used as a backup frequency for communicating with offsite/onsite field monitoring teams.

b. Plant security frequency -

This radio frequency provides communication between the Control Room, TSC, EOF, Security Offices, mobile units in security vehicles and other selected company owned vehicles and personnel equipped with security frequency walkie-talkies.

c. Plant field monitoring frequency -

This radio frequency provides communication between the TSC, EOF, and personnel in the plant equipped with FMT frequency radios. This frequency may be used as a backup for communicating with offsite/onsite field monitoring teams.

d. Digital radio system (multi frequency) -

This radio system provides both onsite/offsite group and private radio communication. This radio system will be the normal communication system for the field monitoring teams.

6. Public Address and Party Lines

A plant wide public address system consisting of six separate and independent communications lines (one page and five party lines) exists to provide quick communications between two or more locations, even in high noise level areas. The page channel is used to call personnel over the speakers, issue plant-wide instructions or to communicate between two or more hand-sets. The party lines are used to carry on communication after the paged party has answered. One of the party lines will be dedicated as an emergency communications channel during emergency conditions.

7. Sound Powered Telephone

Sound powered telephone lines are located between critical points in the plant and are normally used primarily for communications during maintenance and refueling.

8. Plant Emergency Alarm

The Plant Emergency Alarm is a variable tone alarm. The warble tone may be used to alert plant personnel, contractors, and visitors onsite in the event of a Site Area Emergency or General Emergency or other condition requiring all personnel to report to their emergency Assembly Areas. The siren tone may be used to muster the fire brigade or at the discretion of the Shift Supervisor in order to alert personnel. Blue beacon lights located in high noise areas or other locations where the alarms may not be audible are also activated to provide a visual emergency notification.

9. NRC Emergency Notification System (ENS)

This dedicated Federal Telephone System (FTS) communications line provides a dialup communications link to the NRC operations office in Bethesda, MD and would be used for continuous communications in the event of an emergency. Phones are located in the control room, TSC, EOF, and in the Shift Foreman's office adjacent to the Control Room.

10. NRC Health Physics Network (HPN)

This dedicated Federal Telephone System (FTS) communications line provides a dialup communications link with the NRC to provide radiological information. Phones are located in the TSC and in the EOF.

11. State/Local Agency Emergency Notification Network (ENN)

This communications system provides an immediate communications link with the State of Alabama, the State of Georgia and local county personnel in Alabama and Georgia who would possibly be notified in the event of an emergency. Telephones with speakers on this communication network are located at the EOF; TSC; Shift Foreman's Office adjacent to the control room; Alabama Radiation Control Division; Alabama Emergency Management Agency; State of Alabama Department of Public Safety; Houston County (AL) Sheriff's Dispatcher; Houston County Office of Radiological Health; Georgia Emergency Management Agency (GEMA); Early County (GA) Sheriff's Dispatcher; Early County Emergency Management Agency; and GEMA Forward Emergency Operations Center (Early County). The communications system locations listed above for the FNP Shift Support Supervisor's Office; the Alabama Department of Public Safety, the Georgia Emergency Management Agency, the Houston County Sheriff's Dispatcher's Office, and the Early County Sheriff's Dispatcher's Office are staffed 24 hours a day.

12. NRC Reactor Safety Counterpart Link (RSCL)

This dedicated FTS communications line provides a dialup communications link for the NRC to conduct internal NRC discussions on plant equipment conditions separate from the licensee. Phones are located in the TSC and EOF.

13. Protective Measures Counterpart Link (PMCL)

This dedicated FTS communications line provides a dialup communications link for the NRC to conduct internal NRC discussions on radiological releases, meteorological conditions, and the need for protective actions. Phones are located in the TSC and EOF.

14. Management Counterpart Link (MCL)

This dedicated FTS communications line provides a dialup communications link for any NRC internal discussions between the NRC Executive Team Director or Executive Team members and the NRC Director of Site Operations or top level licensee management at the site. Phones are located in the TSC and EOF.

15. Local Area Network (LAN) Access

This dedicated FTS communications line provides the NRC site team with access to the NRC Operations Center's LAN. Connections are provided in the TSC and EOF.

16. Telecopier

Telecopiers are located at the TSC, EOF, Alabama Radiation Control Division, Alabama Emergency Management Agency, GEMA, Houston County Emergency Management Agency, and Early County Emergency Management Agency.

17. SNC Integrated Data Display System

This system provides a direct data link via the internet between Farley Nuclear Plant and at Houston County Emergency Management Agency (EMA), Alabama Radiation Control Division in Montgomery, Georgia EMA in Atlanta, Early County EMA, and the EOF. It may be used to rapidly transmit information on current emergency classification, radiological conditions, and meteorological conditions.

18. Emergency Response Data System (ERDS)

These communications lines provide channels by which raw reactor parametric data is transmitted from the site to the NRC. The affected Unit ERDS will be activated within one hour following the declaration of an Alert emergency or above.

19. Other Communication Systems

A cellular phone is provided for use by the EOF Manager while in transit to the EOF.

C. ASSESSMENT FACILITIES

In order to carry out the assessment actions described in Section IV, facilities must be available for initial as well as continuous evaluation of emergency conditions.

1. Onsite Systems and Equipment

a. Natural Phenomena Monitors

The plant is equipped with a meteorological tower instrumented as shown in Table 2, with both primary and secondary instrumentation for wind speed (10m and 45.7m), wind direction (10m and 45.7m), ambient temperature (10m and 60m), and dew point (10m and 60m). There is also a single channel of instrumentation for precipitation with associated data loggers located at the meteorological tower building. The meteorological tower instrumentation feeds wind speed, wind direction, precipitation, dew point, delta temperature, and sigma theta data to the plant computer. This data is utilized for dose calculations. Computer terminals in the TSC and EOF can be utilized to obtain real time or 15 minute average readouts of meteorological data. Should the plant's meteorological equipment become inoperable, information is available from the approved Flight Service, from the Georgia Pacific Paper Company, or from the regional National Weather Service offices.

Various types of seismic instrumentation are located on vital pieces of equipment and structures throughout the site, a number of which have readout and/or annunciation in the control room. A complete discussion of these monitors is given in FSAR Section 3.7.4. Seismic information may also be obtained from the National Earthquake Center in Golden, Colorado.

The plant is equipped with hydrologic monitors to monitor river water level and service water pond level. These monitors have readout and annunciation in the control room. Redundant river water level monitors provide control room indication from 65 to 130 feet MSL river level. A discussion of service water pond level monitors is given in FSAR Section 9.2.1.5.

b. Radiological Monitors

Portable monitors and sampling equipment used during normal plant operations are available in the Health Physics Instrument Issue Room on elevation 155 of the auxiliary building for use during emergencies. Portable monitors and/or sampling equipment designated for emergency use are located in various areas of the plant. A general category listing of emergency supplies and equipment is included in Appendix 1(A) and an itemized listing can be found in FNP-0-EIP-16, "Emergency Equipment and Supplies”.

Process, area and effluent monitors that may be used for emergency assessment are described in Appendix 3(C). A complete discussion of these monitors is given in FSAR Sections 11.4 and 12.1.4. Monitors on gaseous effluent release points provide

input signals to a plant computer utilized for offsite dose calculations; computer terminals in the TSC and EOF can be utilized to obtain one minute or 15 minute average effluent activity data. FNP-0-EIP-30, "Post Accident Core Damage Assessment", provides correlations between containment high range area monitor readings and core damage.

c. Post Accident Sampling Facilities

Facilities are provided for obtaining highly radioactive samples while minimizing personnel exposure. Reactor coolant samples, both pressurized (RCS) and unpressurized (RHR/containment sump) may be obtained utilizing a remotely operated sampling panel. The panel provides for obtaining samples of both liquid phase and non-condensable gas phase components. Particulate, iodine and noble gas samples may be obtained from the containment atmosphere or the plant vent stack utilizing remotely operated valves. All systems provide for collection of small aliquots of the sampled media. Sampling capability also exists for the steam generators and steam jet air ejectors. Shielded containers, portable shielding and remote handling apparati allow analysis with minimum exposure.

d. Fire Detection

Fire and smoke detection monitors are located in all vital buildings on the plant site with extensive coverage in the Auxiliary Building, Containment and Turbine Building. A complete description of the fire protection and detection systems is given in FSAR Section 9.5, and fire protection re-evaluation report entitled, "Farley Nuclear Plant Fire Protection Program Re-evaluation".

2. Environs Monitoring Facilities and Equipment

A comprehensive environmental monitoring program is established for the Farley Plant covering both onsite and offsite areas. Equipment used in this program that may be used for emergency assessment is as follows:

a. OSLDs

b. Air particulate and iodine monitors

c. Portable radiation survey instruments

Although the OSLDs and the air particulate and iodine samples may be evaluated by an outside vendor, the capability for evaluating the air particulate and iodine samples exists at the plant. FNP-0-RCP-25 provides methodology for utilizing available air sampling and monitoring

equipment to measure radioiodine concentrations in air in the plume exposure EPZ as low as 10-7 uCi/ml under field conditions. Interference from noble gas and background radiation will not decrease the minimum detectable activity. A detailed description of the minimum portable and fixed health physics equipment available at the site is given in FSAR Section 12.3. Predesignated monitoring and sampling points are listed in FNP-0-EIP-4, "Health Physics Support to the Emergency Plan".

The states of Georgia and Florida have mobile laboratory facilities that could be used in case of emergencies. All field monitoring data will be transmitted to and analyzed at the EOF (the TSC until the EOF is staffed). The University of Georgia and Oak Ridge National Laboratories have fixed radiological laboratories in the general geographic area that can aid in radiological analysis. It is estimated that the response time for these organizations will range from 2 to 4 hours.

The plant is equipped with a computer which utilizes automatically input meteorological data, effluent monitor data and selected plant parameter data (e.g. steam generator pressure, plant vent stack flow rate, etc.) to calculate estimated and projected offsite dose. The system automatically actuates when effluent monitors indicate abnormal release point activity and continues until manually terminated. Calculational results are available at computer terminals located at the TSC, EOF and other selected locations.

In the event that the above computer is not available and for long term dose assessment, a manual personal computer method is provided in NMP-EP-104, “Dose Assessment”. The system calculates estimated and projected offsite dose, and plume dimensions, location and arrival times out to 50 miles from the plant site. Meteorological data, effluent monitor data and plant parameter data utilized in the manual calculations will usually be obtained from local data systems. In the event that the local data systems are not available then data may be obtained from the control room meteorological data recorder, effluent monitor instruments and control room indicators.

A detailed discussion of the automatic offsite dose assessment method is provided in FNP-0-M-007, "Emergency Dose Calculation Manual". A detailed discussion of the manual offsite dose assessment method is provided in the MIDAS (Meteorological Information and Dose Assessment System) Technical Manual.

Results of dose estimates and projections are provided to off-site agencies responsible for initiating protective actions using the SNC Integrated Data Display System, telecopy system, ENN, ENS and/or commercial telephones.

3. Personnel Monitoring Equipment

In addition to the portable radiological monitors discussed in Section III.C.1.b external dosimetry equipment is available for personnel monitoring and dose assessment. Digital alarming dosimeters (DADs) provide immediate dose assessment for emergency personnel. Dose assessment will also be provided by plant OSLDs and vendor OSLDs which can be processed on an emergency basis within 24 hours. All dose results will be retained in permanent records for each individual.

D. PROTECTION, DECONTAMINATION AND FIRST AID FACILITIES

1. Protective Facilities and Equipment

The Plant Assembly Areas are designated as the Control Room, Technical Support Center (TSC), Operations Support Center (Room 2452 – North of TSC), Support Building Auditorium, Support Building Cafeteria, Maintenance Training Center, PAP (Non-PA side), Visitor's Center Auditorium, Switchhouse, Fabrication Shop, and Warehouse Receiving Area (Figure 19). All personnel on the plant site will report to one of these designated assembly areas when the Plant Emergency Alarm is sounded. All personnel will be instructed in advance as to which assembly area to report in the event that the Plant Emergency Alarm is sounded.

Alternate Assembly Areas designated for use at the discretion of the Emergency Director are the Contractor Parking Lot, Switchhouse Parking Lot, an area between the Unit #2, 2A, and 2B Cooling Towers, the Utility Building, the Southeast corner of the Control Room, the OPS Ready Room, and the Health Physics (HP) Office (Figure 19).

The Plant Assembly Areas shall serve as the protective facilities. The control room will provide protection for Operations personnel, and is designed to 10CFR50 Appendix 1(A), criteria 19 as described in FSAR section 3.1.15. Control room protective equipment is listed in Appendix 1(A) of the plan.

The Operations Support Center will provide protection for emergency Operations, Health Physics and Repair Party personnel. An emergency cabinet is provided which contains emergency supplies.

The Maintenance Shop and Central Security Control have emergency cabinets provided which contain emergency supplies.

The Support Building Auditorium will provide for assembly of Maintenance , and Facilities personnel. No protective equipment is provided for this facility; however, if required, all non-essential personnel will be evacuated to a safe location.

The Support Building Cafeteria will provide for assembly of Support Building Personnel, Service Building, and Service Building Annex personnel. No protective equipment is provided for this facility; however, if required, all non-essential personnel will be evacuated to a safe location.

Contractor Personnel, MODS Building, and ES Building Personnel will assemble in the Fabrication Shop. After accountability, these personnel will be evacuated if necessary.

OPS Training Center personnel and personnel training in the OPS Training Center will assemble in the Visitor Center Auditorium.

Maintenance Training Center Personnel and personnel training in the Maintenance Training Center will assemble in the Maintenance Training Center.

If necessary, Alternate Assembly Areas will be utilized to conduct accountability and non-essential personnel will be evacuated from the plant site. In the event that the PAP becomes untenable due to accident conditions, the Switchhouse and/or Maintenance Training Center will become the alternate shelter(s). Protective equipment for these locations is listed in Appendix 1(A). Under extreme conditions, APCo facilities that may be used as a personnel staging area are available approximately eight miles from the plant site.

2. Decontamination and First Aid

A first aid station and a decontamination area are located on the plant site. The decontamination area is located in the Auxiliary Building at elevation 155 near the Health Physics Office. The first aid station is located in the Auxiliary Building at elevation 155 and a Nurses Station is located in the Training/Visitors Center. Personnel decontamination and first aid supplies are provided for each of the two areas. Stretchers and first aid kits are located strategically throughout the plant. There is at least one person on each shift qualified to perform first aid. Plant employees are considered to be first aid qualified upon successful completion of the Company's First Aid Course and are required to be requalified within three years.

3. Medical Transportation

Request for ambulance support will be made by the control room or site security to the Houston County 911 center, Houston County EOC, or the Incident Command Post, as applicable, based on the nature and timing of the event.

a. Local Rescue Squads

Ashford Rescue Squad

Columbia Rescue Squad

Dothan Ambulance Service (Pilchers Ambulance Service), Inc.

4.Medical Treatment:

The detailed plans for the handling and care of injured personnel potentially contaminated and/or highly irradiated are contained in Part II, Medical Plan and FNP-0-EIP-11, "Handling of Injured Personnel". A brief description of the facilities and services available for medical support is given below. Letters of agreement on file from these facilities:

a. Southeast Alabama Medical Center

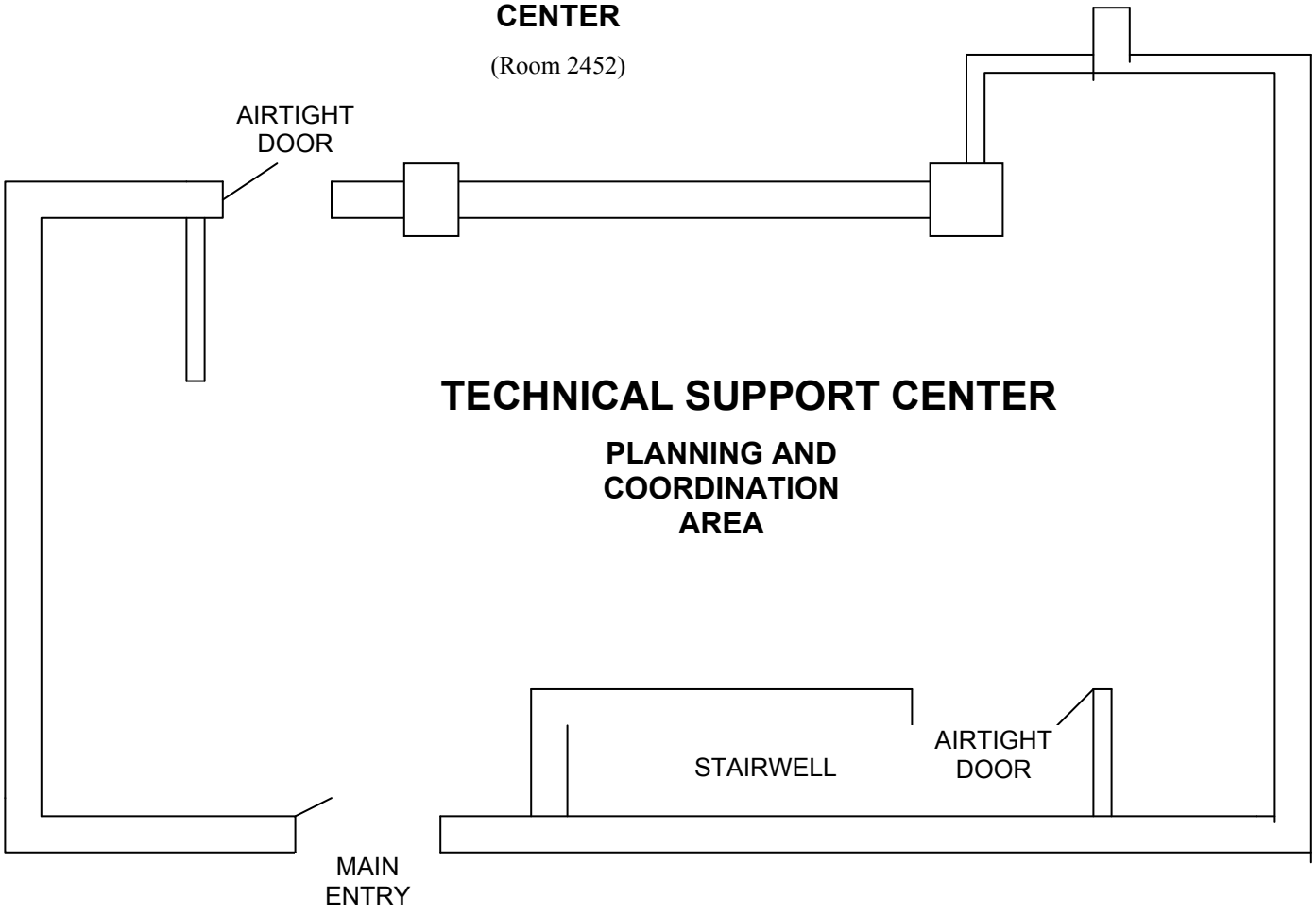
The Southeast Alabama Medical Center in Dothan, Alabama, has agreed to receive and care for injured personnel that may be contaminated or irradiated. In addition to routine medical care, space has been provided for a decontamination and emergency treatment facility and for storage of emergency medical equipment, monitoring equipment and dosimeters. Entrance to this facility will not affect the use of the hospital emergency room.

b. University of Alabama Hospital

The Division of Oncology of the University of Alabama Hospital in Birmingham, Alabama, has agreed to provide, on a priority basis, definitive care for irradiated and/or contaminated casualties. An area of the hospital has been modified to provide for such radiological emergencies. At the physician’s discretion, persons who have been exposed may be sent to the University of Alabama Medical Center after receiving treatment at the Southeast Alabama Medical Center.

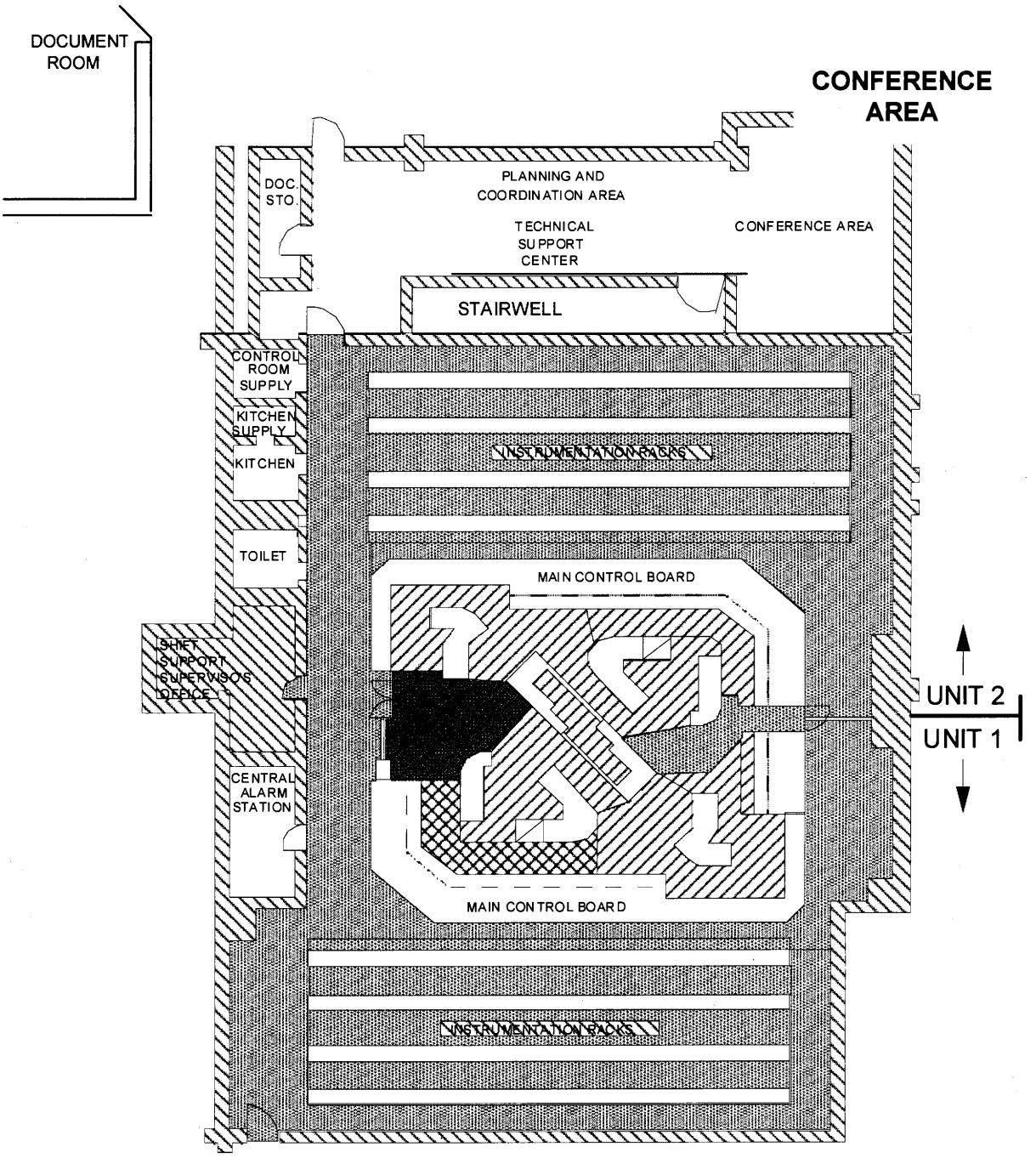
c. Oak Ridge Institute for Science and Education - REAC/TS

The Oak Ridge Institute for Science and Education-REAC/TS team at Oak Ridge, Tennessee, has agreed to accept any type of radiation accident victim in need of hospitalization. At the physician’s discretion, persons who have been exposed may be sent to ORISE-REAC/TS after receiving treatment at the Southeast Alabama Medical Center.



TECHNICAL SUPPORT CENTER

Figure 14

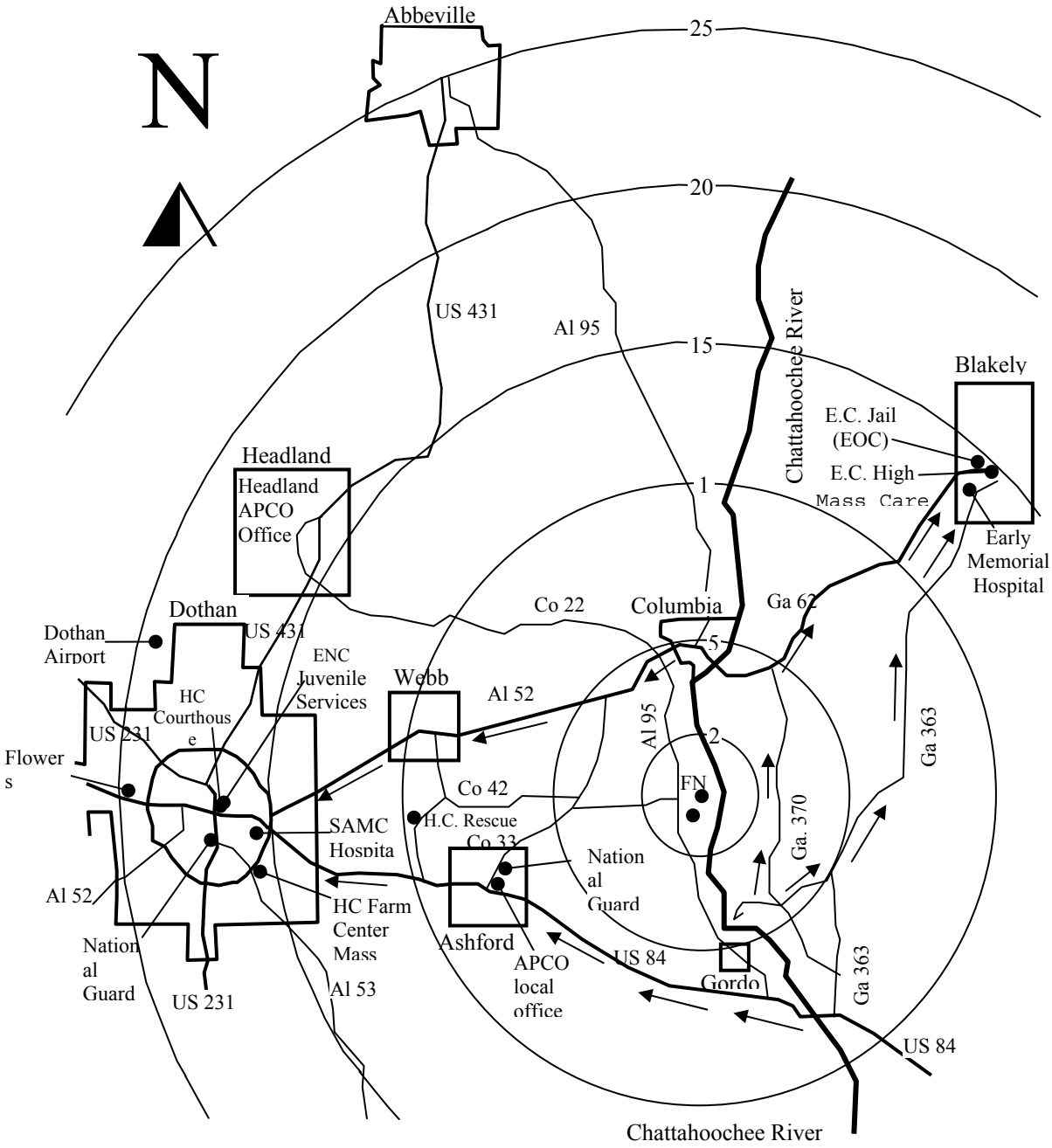


CONTROL ROOM AND TECHNICAL SUPPORT CENTER

FIGURE 15

DELETED

FIGURE 16

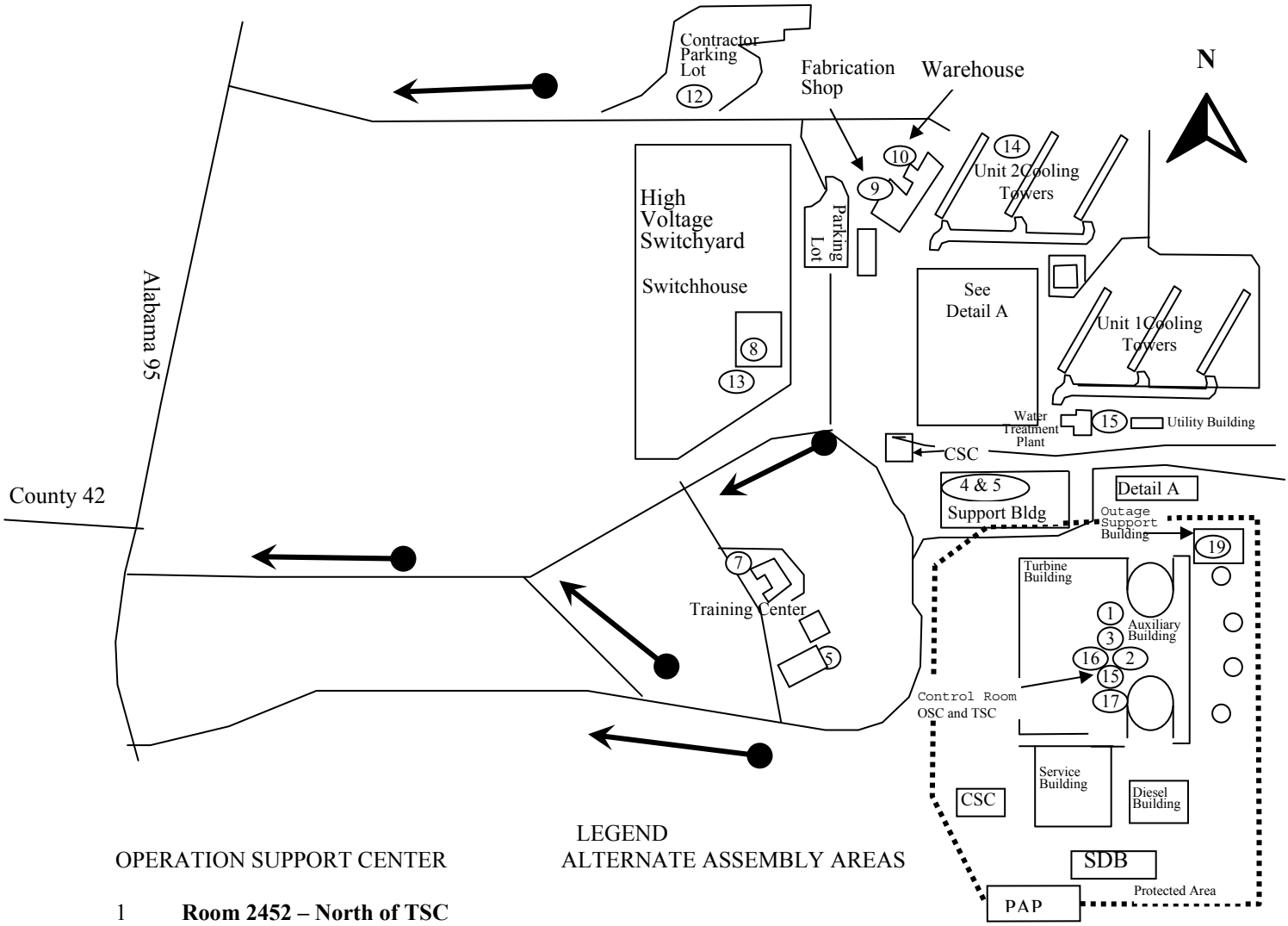


SITE AREA EMERGENCY FACILITIES, GENERAL POPULATION SUPPORT SERVICES AND EVACUATION ROUTES

Figure 17

DELETED

Figure 18



LEGEND

OPERATION SUPPORT CENTER

1 **Room 2452 – North of TSC**

ASSEMBLY AREAS

2 **Control Room**
3 **Technical Support Center (TSC)**
4 **Support Building Auditorium**
5 **Support Building Cafeteria**
6 **Maintenance Training Center**
7 **PAP (OS protected area)**
8 **Visitor's Center Auditorium**
9 **Switchhouse**
10 **Fabrication Shop**
11 **Warehouse Receiving Area**

ALTERNATE ASSEMBLY AREAS

12 **Contractor Parking Lot**
13 **Switchhouse Parking Lot**
14 **Between 2A & 2B Cooling Towers**
15 **Utility Building**
16 **SE Corner of Control Room**
17 **OPS Ready Room**
18 **HP Office Area**

EVACUATION ROUTES

ONSITE EVACUATION ROUTES, ASSEMBLY AREAS AND OPERATIONS SUPPORT CENTER

FIGURE 19

COMMUNICATIONS EQUIPMENT AVAILABILITY

LOCATION	Commercial Telephone Lines	PAX Telephone	General Office Lines	Plant Intercom	TSC – EOF- OSC Bridge	Security Two-Way Radio	Operations Two-Way Radio	ENN – Emergency Notification Network	NRC-(ENS) Emergency Notification System	NRC-(HPN) HP Network	NRC – RSCL, PMCL, MCL, LAN	RMT Two-Way Radio
Technical Support Center	*	X	X *	X	X	X	X	X	X	X	X	X
Shift Foremans Office	*	X	*	X	X		X	X	X			
Control Room	*	X	*	X	X	X	X		X			
Emergency Operations Facility	X		X		X	X	X	X	X	X	X	X
Joint Information Center	X * +	X	* +		X							
Assembly Areas	*	X	*	*	X							
Operations Support Center	*	X	*	X	X							

X Directly available
* Accessible through the FNP PAX system
+ Accessible through the District Office PAX system

TABLE 1

EMERGENCY FACILITY COMMUNICATIONS CAPABILITY

METEOROLOGICAL INSTRUMENTATION AT THE FARLEY SITE

Approximate Height Above Tower Base (M)	Sensed Parameter	Recorded Parameter
Ground	Precipitation	Precipitation
10m	Relative Humidity	Dew Point (Primary)
10m	Relative Humidity	Dew Point (Secondary)
10m	Temperature	Ambient Temp (Primary)
10m	Temperature	Ambient Temp (Secondary)
60m	Temperature	Ambient Temp (Primary)
60m	Temperature	Ambient Temp (Secondary)
60m-10m	Δ Temperature	ΔT (T60-T10) (Primary)
60m-10m	Δ Temperature	ΔT (T60-T10) (Secondary)
10m	Wind speed	Wind speed (Primary) (0-145 mph)
10m	Wind speed	Wind speed (0-145 mph) (Secondary)
10m	Wind direction	Wind direction (Primary)
10m	Wind direction	Wind direction (Secondary)
45.7m	Wind speed	Wind speed (0-145 mph) (Primary)
45.7m	Wind speed	Wind speed (0-145 mph) (Secondary)
45.7m	Wind direction	Wind direction (Primary)
45.7m	Wind direction	Wind direction (Secondary)

TABLE 2

Intentionally Blank

IV. ASSESSMENT ACTIONS AND PROTECTIVE MEASURES

A. CLASSIFICATION OF EMERGENCIES

CLASSIFICATION OF EMERGENCIES IS DESCRIBED IN APPENDIX 11(k)

B. POST ACCIDENT ASSESSMENT ACTIONS

Effective coordination and direction of all elements of the emergency organization require continuing assessment through the duration of the emergency situation. In addition to continued monitoring of control room instrumentation and plant parameters, some special assessment actions are, initiated if appropriate. These assessment functions are identified below:

1. Reactor Coolant Sampling, Containment Atmosphere Sampling and Plant Vent Stack Sampling.

   RCS, containment atmosphere and/or plant vent stack samples will be taken and analyzed to assess the severity of core damage and the potential radiological consequences. The detailed sampling procedures for each area are provided in FNP-1/2-CCP-1300, "Chemistry and Environmental Activities During a Radiological Accident". FNP-0-EIP-30, "Post Accident Core Damage Assessment" provides a method to estimate the extent of core damage utilizing various plant monitor readings.

2. Surveillance of Control Room Monitors

   Surveillance of radiological and meteorological monitors in the control room is primarily the responsibility of operations personnel. However, in the event that offsite assessments based on this data are necessary, an individual designated by the Emergency Director will maintain surveillance over effluent monitor readings and dose projections, periodically reporting them to those designated in FNP-0-EIP-6, "TSC Setup and Activation". If the dose assessment computer is inoperable, the designated individual will periodically log the monitor values.

3. In-Plant and Site Surveys

   During emergency conditions in-plant, site and site boundary surveys will be performed as appropriate by the Field Monitoring Team as described in FNP-0-EIP-4, "Health Physics Support to the Emergency Plan". The Field Monitoring Team will be capable of sampling under field conditions and will be capable of measuring radioiodine in the presence of noble gas and background radiation to as low as 5×10^{-8} uCi/cc.

4. Population Exposure

Exposure projections shall be periodically estimated in the affected sectors utilizing projected dose and measured dose rates. The Dose Assessment Supervisor will work with the state/local agency representatives to determine the Total Effective Dose Equivalent (TEDE) exposure (resulting from external exposure and inhalation of the plume and external exposure from deposition) and thyroid Committed Dose Equivalent (CDE) exposure (resulting from the inhalation of radio-iodines).

5. Environs Surveys and Monitoring

   a. Short Term Assessment

      Short term assessment will involve the use of the estimates and projections provided by the emergency dose calculation computer programs performed in accordance with NMP-EP-104, “Dose Assessments”. Onsite and offsite surveys will be performed as necessary to verify release information or as a backup assessment method should the instrumentation used for dose assessment go off-scale or become inoperable. Monitoring teams will normally be dispatched in vehicles and will be equipped with two-way radios for communication with the TSC or EOF. Teams will be equipped with liquid sampling equipment, a GM instrument, an ion chamber instrument, and/or an air sampler as deemed appropriate by the Emergency Director, Health Physics Supervisor or Dose Assessment Supervisor. An environs survey team could be in the field within one hour. Radiological survey and sampling points will be identified by sector as shown in Figure 20. The correlation of various measured parameters (contamination levels, water and air activities) to dose rates for key isotopes and gross radioactivity levels is provided by FNP-0-RCP-25.

   b. Long Term Assessment

      The long term aspects involving offsite assessments of contamination involving analysis of soil, vegetation, food, milk and water will be primarily handled by the states of Alabama, Georgia, and Florida as discussed in their Radiological Emergency Plans. The response of SNC would be to increase the sampling frequency of its established environmental monitoring program.

C. PROTECTIVE ACTIONS AND EMERGENCY ACTION LEVELS

The nature of protective actions to be implemented, the criteria for application, and the area involved or groups of persons for whom the protective actions would be taken are given here.

1. Onsite Protective Action

   a. Evacuation

      In the event of a Notification of Unusual Event an area of the turbine building, auxiliary building, or containment may have to be evacuated. Personnel would be notified to evacuate the affected area via the public address system as directed by the Emergency Plan Implementing Procedures.

      Should a Site Area Emergency, General Emergency, or an Alert be declared, immediate notification of all persons onsite may be accomplished by sounding the Plant Emergency Alarm and announcing the condition over the plant public address system. Personnel onsite would report to their pre-assigned assembly area and preparations for evacuation of nonessential persons from the site would begin. Depending on the severity of the emergency condition, these individuals will be held in an assembly area, evacuated, or returned to work.

      If a site evacuation is warranted, personnel will be advised as to which routes should be used. The normal routes are State Highway 95 North or South and County Road 42 West (Figures 17 and 19). All personnel being evacuated from the site will be monitored before being released. Personnel leaving the site would then proceed, in their own vehicles, on one of these major routes, to their residences. Transportation for persons without vehicles will be arranged.

      The details for evacuation and personnel accountability of all categories of personnel listed above are given in FNP-0-EIP-10, “Evacuation, Personnel Accountability, and Site Dismissal” and FNP-0-EIP-14 “Emergency Response Teams”.

   b. Personnel Accountability

      Each plant supervisor or the senior individual onsite from his group is responsible for accounting for all persons working in or visiting his group. Accountability within the Protected Area will be determined by the senior individual at the assembly area coordinating with the Security Response Center (SRC) and then will be reported to the Emergency Director by the senior plant security force member at the SRC. Accountability within the Controlled Area will be determined by the senior individual at each assembly area coordinating with the Security Response Center (SRC) Staff and then will be reported to the Emergency Director by the senior individual in the SRC. Contractor personnel assigned to Plant Modification and Maintenance Support (PMMS) report to the Fabrication Shop and will assemble by individual craft. Fitness for Duty Facility personnel outside the Protected Area report to the Visitor’s Center Auditorium. No public access areas

pass through or are within the owner controlled area. The owner controlled area is fenced and/or posted. Security patrols are conducted at random intervals as a part of daily routine. Detailed procedures for determining and reporting accountability and Responsibilities for accountability during local evacuations are given in FNP-0-EIP-10, "Evacuation, Personnel Accountability, and Site Dismissal".

Following accountability initiation, security personnel will control site access and egress for the duration of the emergency, maintaining entry/exit logs to allow accountability of all personnel onsite.

c. Hostile Action Protective Measures

Onsite protection of employees during hostile action involves a combination of restricted movement, movement to safe locations, and site evacuation depending on the nature of the hostile event and advance warning. Site procedures provide specific actions to take during hostile action based events. These actions will be communicated to onsite personnel via the plant PA system and other communications means as applicable.

c. Contamination and Exposure Control Measures

The limits for personnel exposure set forth in 10CFR20 shall not be exceeded without approval of the Emergency Director or his designee. Emergency exposure criteria are:

1) Farley Nuclear Plant personnel who have completed the onsite radiation protection training, may receive

- 10 Rem

When emergency onsite action is required to eliminate a source or potential source that represents a hazard to the general public or to prevent a substantial loss in property and a lower dose is not practicable.

- 25 Rem

For life-saving operations such as rescue and search for known missing persons or for protection of large populations when a lower dose is not practicable.

- >25 Rem but not to exceed 100 Rem

For lifesaving or protection of large populations only on a voluntary basis. The volunteer worker should do so with full awareness of the associated risks for the radiation dose to be incurred.

2) Hospital and Ambulance Service Personnel, may receive

- 3 Rem

If there is an adequate number of attendants such that rotation may be accomplished without further endangering the patient(s).

- 5 Rem

If the number of attendants is limited such that personnel cannot be rotated.

- 25 Rem

To save a life.

Dosimetry, respiratory protection equipment and protective clothing will be issued for use in accordance with established Radiological Control Procedures. A supply of radio protective drugs (potassium iodide) is available onsite and, if necessary, will be issued at the direction of the Emergency Director to emergency personnel remaining or arriving onsite.

The levels of permissible radioactive contamination for personnel and equipment to be released from an RCA during an emergency are as follows:

Personnel	Equipment	
<5,000 dpm/100 cm^2	ND GMT/100 cm^2	(smearable)
	and	
	< .25 mR/hr	(fixed)

However, the Emergency Director may authorize higher levels based on plant conditions and recommendations from the HP Supervisor. When levels above these values are encountered, decontamination will be initiated. Facilities, supplies and waste disposal capability exists to provide for both personnel (emergency or onsite relocated) and equipment decontamination. Methods for equipment decontamination are discussed in NMP-HP-304, "Decontamination of Areas, Tools, and Equipment" and for personnel in NMP-HP-303, "Personnel Decontamination" with particular attention being given to radioiodine contamination of the skin. Extra clothing for personnel will be provided in the event personal clothing is confiscated. Information on personnel decontamination facilities is contained in Section III.

To prevent or minimize direct or subsequent ingestion exposure to radioactive materials deposited on the ground or other surfaces, access into the exclusion area will be controlled by security personnel. Additionally, if conditions warrant, the site drinking water will be sampled and analyzed for radioactivity and quarantined, if necessary. If a quarantine is placed on the water, it will not be returned to use until the activity has returned to within acceptable limits as dictated by the State of Alabama Board of Health "Regulations Governing Public Water Supplies".

Personnel which are found to be contaminated when monitored during evacuation will be returned to the plant for deconning if possible. If the plant is not accessible, the personnel will be transported to the nearest decontamination facility.

Offsite contamination controls are described in the states of Alabama, Georgia, and Florida plans.

2. Offsite Protective Action

The states of Alabama, Georgia, and Florida are responsible, in

their respective state, for handling the offsite radiological aspects of any emergency that should develop at the Farley Nuclear Plant. The Emergency Plans for Alabama, Georgia, and Florida are given in each states Radiological Emergency Plan.

The criteria to be used for offsite protective action recommendations is given below. The basis for protective action guides is the "Manual of Protective Action Guides and Protective Action for Nuclear Incidents", EPA-400-R-92-001. It should be noted that these levels are quite low and are used as guidelines for protective action rather than rigid levels of action. Recommendation of sheltering in residences shall be considered when there is radiological puff release that exceeds the projected dosage for a general emergency listed in section a below or there are hazards on or off-site that would make an evacuation dangerous. Areas within a ten mile radius in which protective action is deemed necessary will be referred to by Evacuation Zone as shown in Figure 21. The population distribution within this ten-mile radius has been predicted for the life of the plant and is summarized graphically in Figure 22.

a. Classification of Offsite Incidents

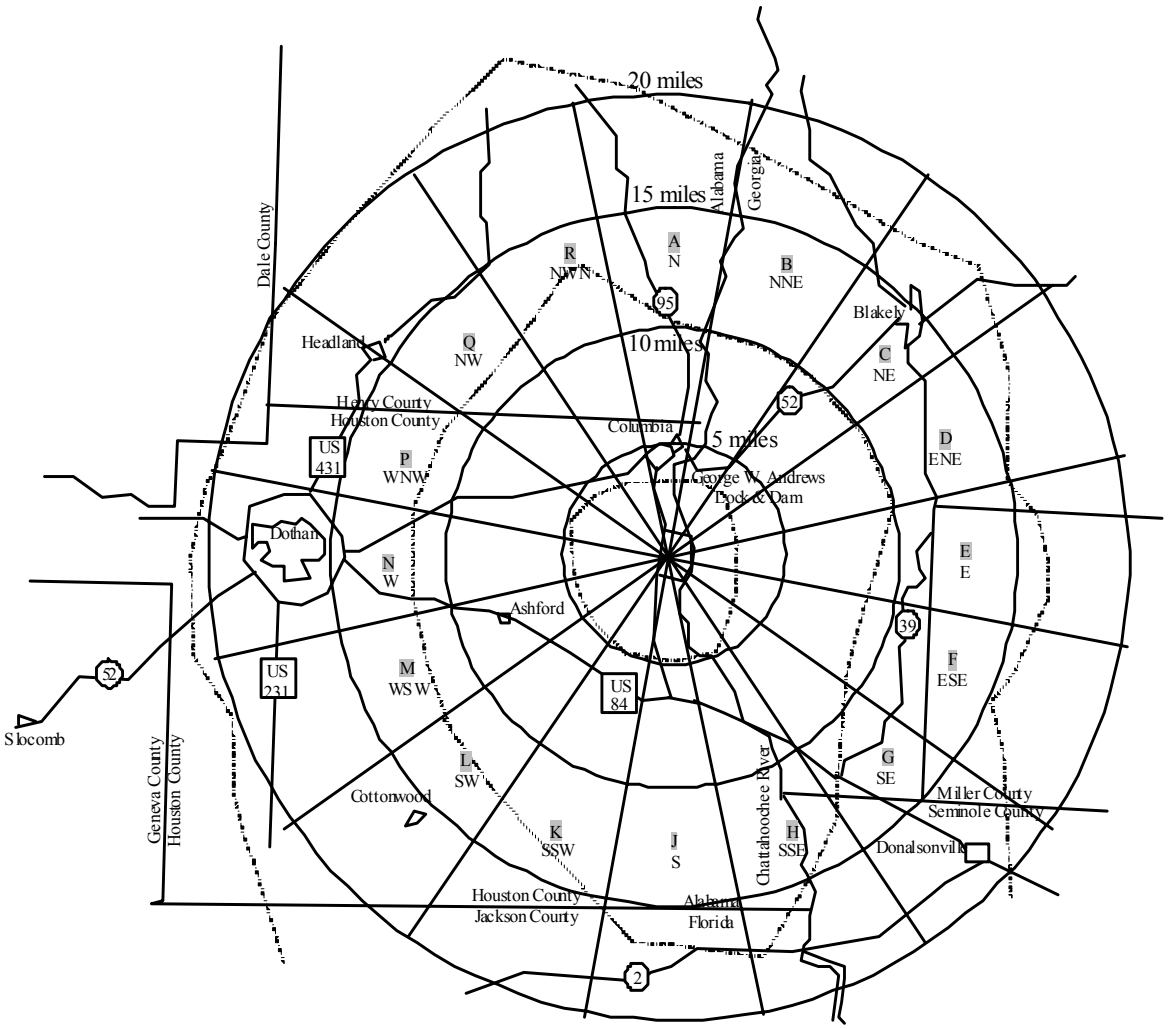
SNC Classification	Projected Dosage	Organ or Media Involved
GENERAL	1.0 Rem	TEDE
	5.0 Rem	Thyroid CDE
SITE AREA	0.1 Rem	TEDE
	0.5 Rem	Thyroid CDE

b. Response

Classification	Protective Actions to be Recommended to State Authorities
GENERAL	NMP-EP-112, “Protective Action Recommendations,” provides detailed guidance on the methodology and determination of protective action recommendations (PARs). PARs were developed in accordance with NUREG-0654 Supplement 3 Rev. 1. Evacuation Time Estimates and Off-site Response Organizations were fully involved in the development of the PARs. The Emergency Director will approve the PAR decision developed by the methodology in the Initial and Follow-Up Flowcharts, shown as Chart 1, Initial and Chart 2, Follow-Up. Recommendations will be based on plant conditions, projected dose estimates, or available monitoring data.

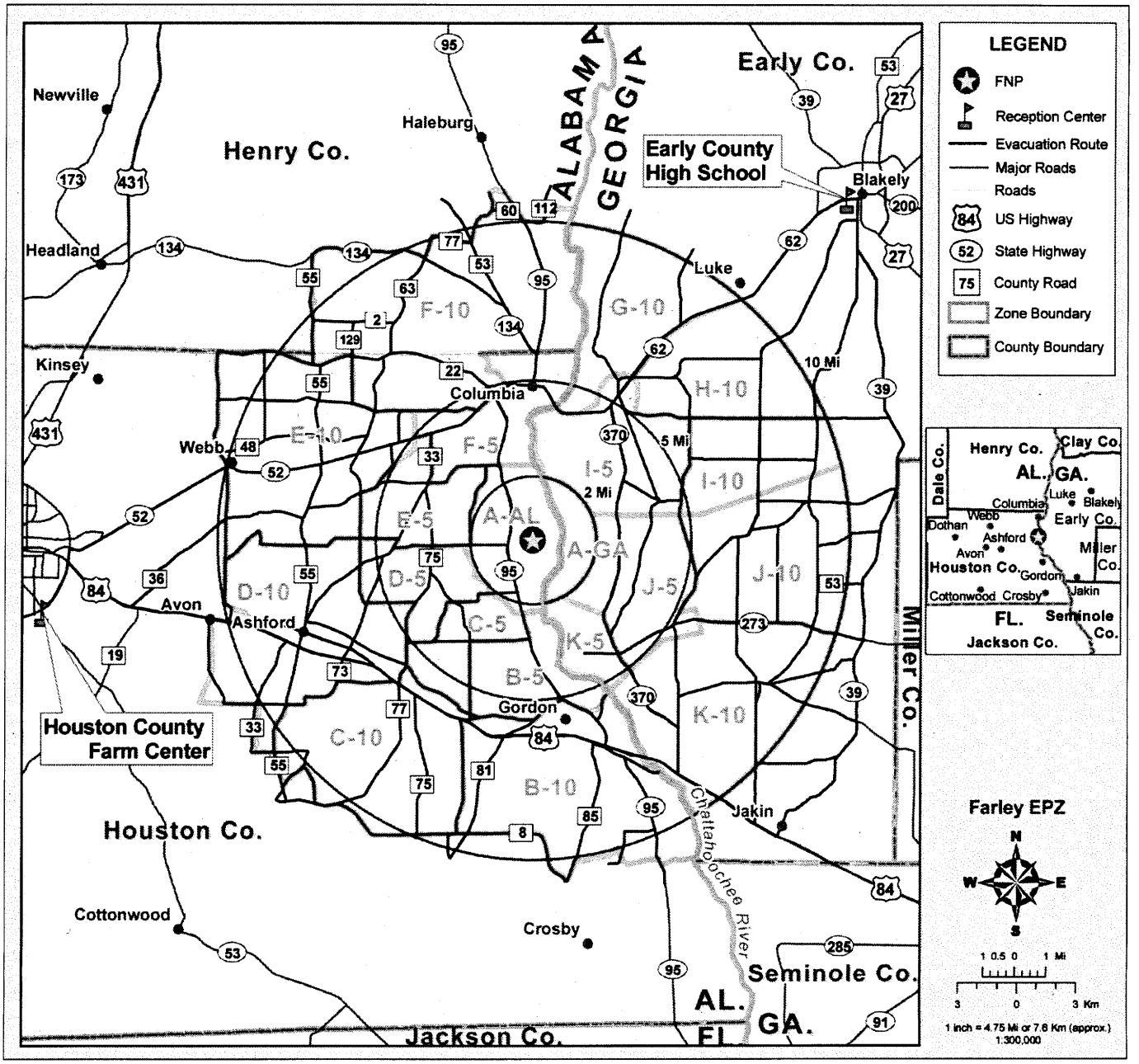
Classification	Protective Actions to be Recommended to State Authorities
SITE AREA	No Protective Action Recommendations are to be made at the Site Area emergency level. The Emergency Director should upgrade to a General Emergency if PARs are determined to be needed and not already in a General Emergency.
ALERT	No Protective Action Recommendations are to be made at the Alert level. The Emergency Director should upgrade to a General Emergency if PARs are determined to be needed and not already in a General Emergency.

The authority for initiation or relaxation of protective action recommendations is vested solely with the Emergency Director and may not be delegated to any other member of the emergency organization. Processes for development, approval, and notification of protective action recommendations are described in NMP-EP-111, “Emergency Notifications”, and NMP-EP-112 “Protective Action Recommendations”.



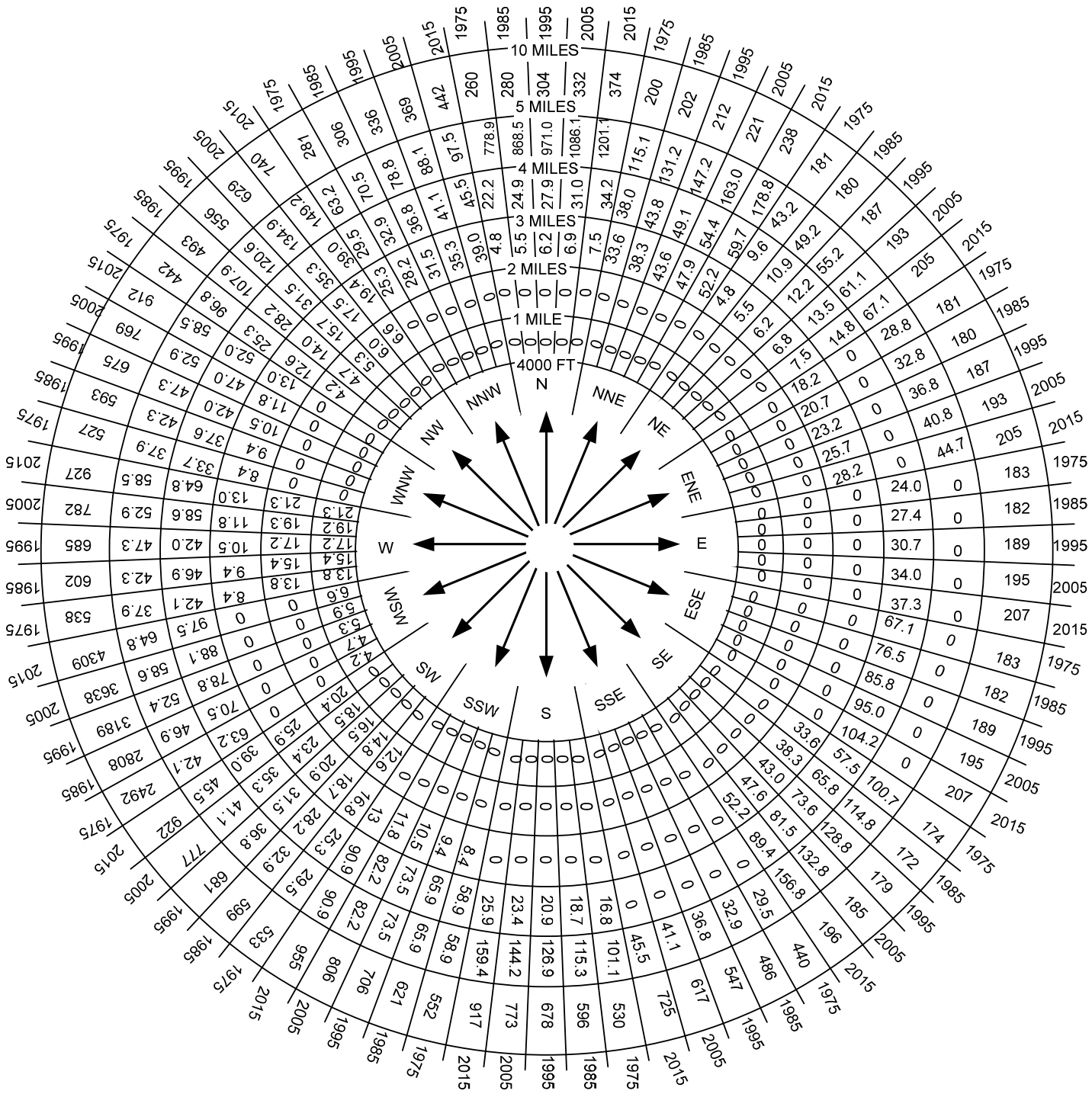
RADIOLOGICAL SURVEY AND SAMPLING REPORTING SECTORS

FIGURE 20



PROTECTIVE ACTION SECTORS

FIGURE 21



PREDICTED POPULATION IN THE VICINITY OF FARLEY NUCLEAR PLANT
FIGURE BASED ON FSAR FIGURES 2.1-5, 6 AND 7

FIGURE 22

INITIAL PROTECTIVE ACTION RECOMMENDATIONS

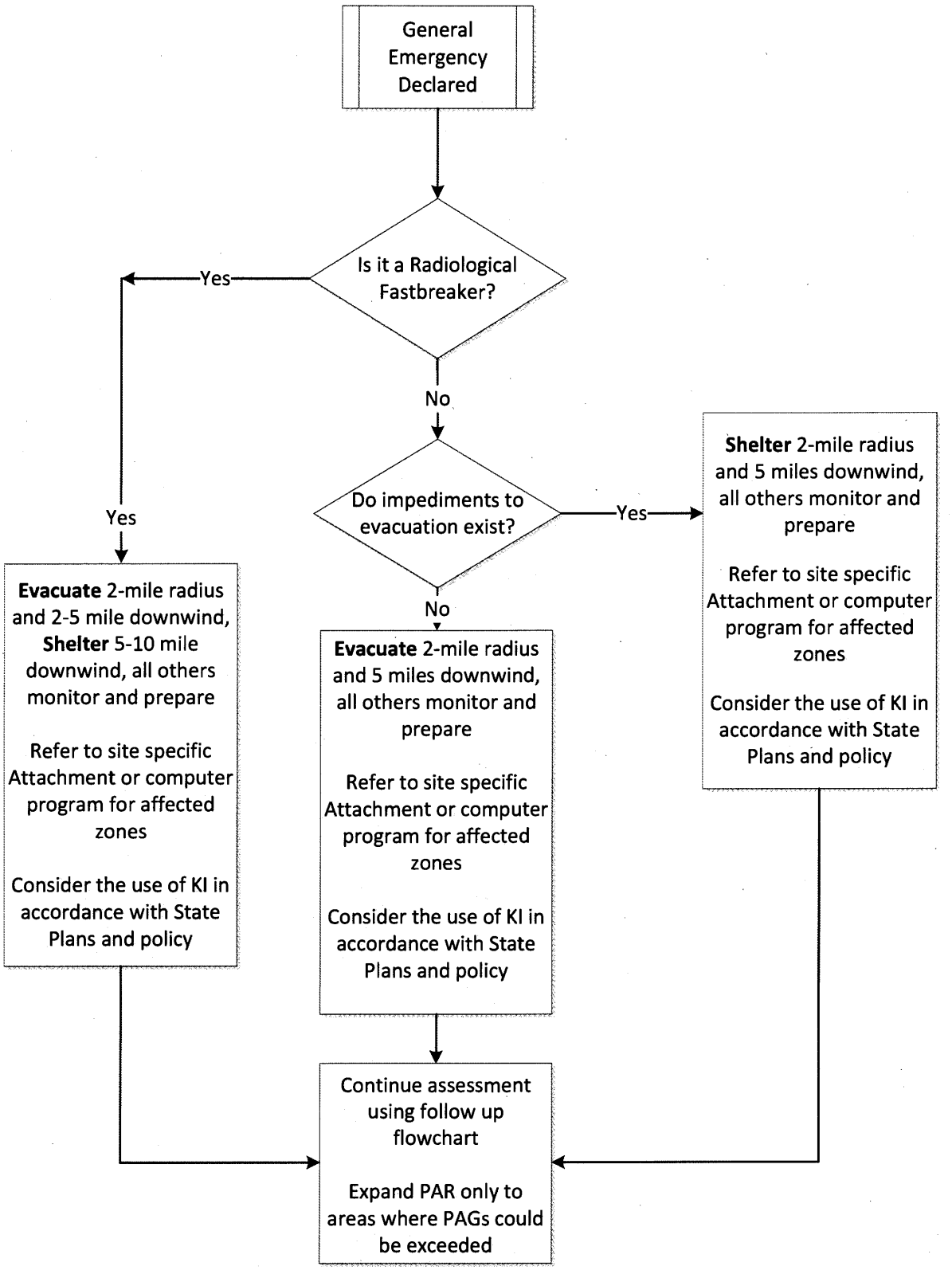


CHART 1

FOLLOW UP PROTECTIVE ACTION RECOMMENDATIONS

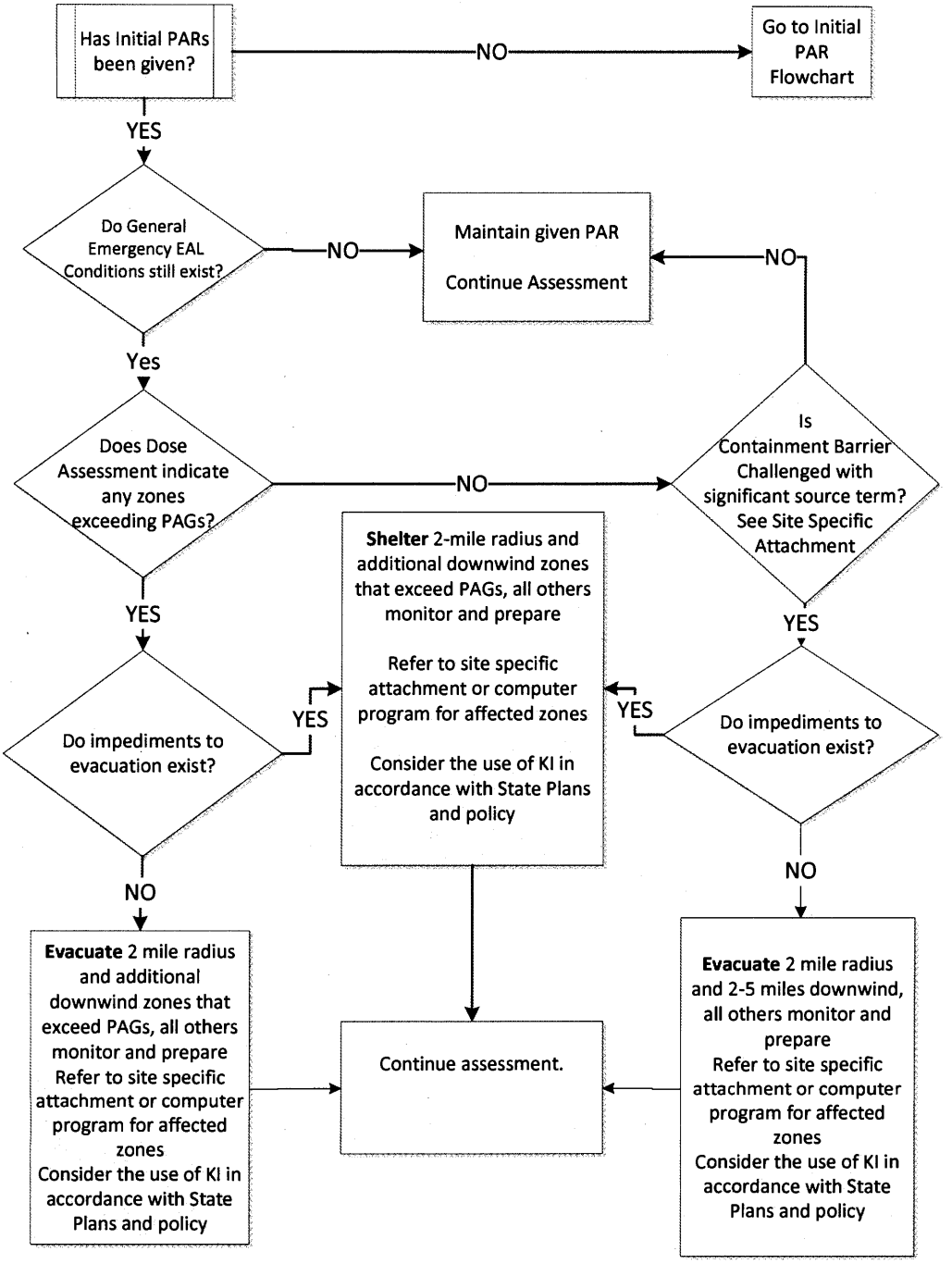


CHART 2

V. ACTIVATION OF EMERGENCY ORGANIZATION

A. DECLARATION OF AN EMERGENCY

The Shift Manager shall have the authority and responsibility to immediately and unilaterally declare an emergency and initiate emergency response. Section IV of this plan delineates criteria for declaring emergency conditions.

Upon declaration of an emergency the Shift Manager will immediately notify the on-call Emergency Director (ED). Until the on-call ED arrives onsite and relieves the Shift Manager, the Shift Manager shall complete the duties of the ED prior to the on-call ED taking full responsibility for implementation of the Emergency Plan. Duties of the Shift Manager as an Emergency Director are addressed in NMP-EP-110, "Emergency Classification Determination and Initial Action" and NMP-EP-111, “Emergency Notifications”.

The ED, Shift Clerk, or designee will notify the EOF Manager of the emergency condition. The EOF Manager will decide on the appropriate level of activation utilizing the criteria shown in Table 4.

B. ORGANIZATION ACTIVATION

The minimum quantity of personnel available on shift and the quantity of additional personnel available within 75 minutes following declaration of the emergency to staff the emergency organization are shown in Table 3. A copy of the On-Shift Staffing Analysis which forms the technical basis for Minimum Shift Staffing provided in Table 3 is maintained in the SNC document management system. Reference OSA-FNP-001.

Each shift shall have a Shift Technical Advisor (STA). The STA will have No duties or responsibilities for manipulation of controls or command of operations during an emergency.

The normal shift crew will consist of at least those positions listed as "on shift" in Table 3. There will be a licensed operator in each unit's control room at all times when fuel is in the core of the respective unit. There will be a Senior Reactor Operator (SRO) in the control room (shared) at all times when fuel is in either core. Shift staffing for core alterations will also include either a SRO limited to fuel handling or a SRO not assigned any duties concurrent with core alterations.

Upon receiving notification of an emergency, the Emergency Director will proceed to the site. A shift communicator will coordinate the plant call list to notify those individuals of the Emergency Organization needed to meet initial activation requirements. The EOF Manager will be notified in accordance with NMP-EP-110, "Emergency Classification Determination and Initial Action”.

During hostile action based events, ERO members would likely not have access to the onsite emergency response facilities. A security related emergency may delay the ordering of facility activation in order to protect plant personnel form the security threat. The decision to delay activation of the facilities will be made by the Emergency Director. In such cases, offsite ERO personnel will be directed to an alternative facility to minimize delays in overall site response by permitting ERO assembly without exposing responders to the danger of hostile action.

Criteria for the activation of the Technical Support Center, Operations Support Center, and Emergency Operations Facility are shown in Table 4.

1. Technical Support Center Activation

   The onsite emergency response organization which will be directed from the TSC is described in Section II. The TSC will be staffed and ready to receive emergency response functions by the following on-call individuals within 75 minutes following declaration of an emergency requiring TSC activation:

   Emergency Director

   TSC Manager

   Operations Supervisor

   Health Physics Supervisor

   Engineering Supervisor

   Maintenance Supervisor

   ENN Communicator

   Within eight hours of the declaration of the emergency one full complement of personnel as designated above will be available to relieve the TSC personnel.

   There shall be sufficient personnel available within 16 hours of the declaration of the emergency to ensure that the TSC can be staffed on a 24-hour-a-day basis for at least one week.

2. Operations Support Center (OSC) Activation

   The Operations Support Center will be staffed and ready to provide support to the emergency response effort as directed by the Emergency Director within 75 minutes following declaration of an emergency requiring OSC activation.

   Other members of the Emergency Organization arriving at the plant will report to their assigned assembly areas. Within 8 hours after declaration of an emergency, sufficient personnel shall be available in the OSC to ensure that shift personnel can be relieved by qualified individuals.

   Within 16 hours after declaration of an emergency, sufficient personnel shall have been notified and placed on-call to ensure that the OSC can be staffed on a 24-hour-a-day basis for at least one week.

3. Emergency Operations Facility (EOF) Activation

   The corporate emergency response organization which will be activated to respond from the EOF is described in Appendix 7(G).

4. Alternative Facility Activation

   The ERO staff will be directed to report to the Alternative Facility during a security related event, or other events that preclude onsite access. This facility functions as a staging area for augmentation of emergency response staff and provides the capability for communication with the EOF, control room, and plant security. From this facility the ERO will support event response by performing engineering assessment activities, including damage control team planning and preparation for return to the site. The command and control function will remain with the ED in the control room until relieved by another onsite ED. Dose assessment and offsite notifications will be performed by the EOF. Procedural guidance for the alternative facility is provided in NMP-EP-135, Alternative Facility Setup and Operation.

C. OFFSITE CORPORATE ORGANIZATION ACTIVATION

The corporate emergency response organization which will be directed from the EOF is described in Appendix 7(G). The corporate Emergency Communication Organization activation is described in Appendix 10(J).

D. OFFSITE LOCAL, STATE AND FEDERAL AGENCIES

Notification of offsite governmental agencies is discussed in Section VI. Activation of the state agencies is discussed in their respective plans.

MAJOR FUNCTION AREA	MAJOR TASKS	POSITION TITLE OR EXPERTISE	ON SHIFT	CAPABILITY FOR ADDITIONS WITHIN 75 MINUTES *****
Plant Operations and Assessment of Operational Aspects		Shift Supervisor (SRO)	2	----
		Control Room Operators	4	----
		Auxiliary Operators	3	----
Emergency Direction and Control (Emergency Director)**		Shift Manager or Emergency Director	1	----
Notification/ Communication****	Notify Licensee, State Local and Federal personnel & maintain communication.		2****	2
Radiological Accident Assessment and Support of Operational Accident Assessment	Emergency Operations Facility (EOF) Dir.	Senior Manager	----	1
	Offsite Dose Assessment	Senior CHM, & ENV. with Expertise in Offsite Dose Assessment	1	----
	Offsite Surveys ##	HP/CHM. Technicians	2	2
	Onsite (out-of-plant)##	and other trained	----	2
	In-plant surveys	personnel	2	2
	Chemistry/Radiochemistry	CHM Technician	1	1
Plant System Engineering Repair and Corrective Actions	Technical Support	Shift Technical Advisor#	1	----
		Core/Thermal Hydraulics#	----	1
		Electrical	----	1
		Mechanical	----	1
	Repair and Corrective Actions	Mechanical Maintenance/	1	1
		Rad Waste Operator		1
		Electrical Maintenance	1	1
		Instrument and Control (I&C) Technician	1	1

TABLE 3. Page 1 of 2

MAJOR FUNCTION AREA	MAJOR TASKS	POSITION TITLE OR EXPERTISE	ON SHIFT	CAPABILITY FOR ADDITIONS WITHIN 75 MINUTES ***
Protective Actions (In-plant)	Radiation Protection: a. Access Control b. HP Coverage for repair, corrective actions, search and rescue first-aid & firefighting c. Personnel monitoring d. Dosimetry	HP/CHM Technicians or other trained personnel	2	2
Firefighting			5 Fire Brigade per the FSAR Fire Tanker Driver 1	Local Support
Rescue Operations and First-Aid			2*	Local Support
Site Access Control and Personnel Accountability	Security, firefighting communications, personnel acountability	Security Personnel	All per Security Plan	
		T O T A L	28	19

NOTES:

* May be provided by shift personnel assigned other functions.

** Overall direction of facility response to be assumed by EOF director when all centers are fully manned.
Direction of minute-to-minute facility operations remains with senior manager in technical support center or control room.

*** Staffing capability in 75 minutes is dependent upon immediate availability of personnel, time of day, weather conditions, or radiological conditions

**** State, Local, and Federal notifications/communications may be performed by any available, qualified shift personnel (e.g., SM, SS, SSS, STA, RO, or other appropriately qualified personnel).

\# The STA performs the needed functions of STA & core/thermal hydraulics monitoring & analysis prior to augmentation during the first 75 minutes.

A single out-of-plant radiation monitoring team may cover both on-site and off-site surveys prior to augmentation within 75 minutes.

TABLE 3. - Page 2 of 2

TABLE 4

EMERGENCY FACILITY ACTIVATION

	Unusual Event	Alert	Site Area Emergency	General Emergency
Technical Support Center	*	Activate#	Activate#	Activate
Operations Support Center	*	Activate#	Activate#	Activate
Emergency Operations Facility	**	Activate#	Activate#	Activate
APC Corporate Headquarters	**	Activate#	Activate#	Activate
Joint Information Center	**	Activate#	Activate#	Activate

NOTE:

***** No action, standby or activation at the discretion of the Emergency Director

****** No action, standby or activation at the discretion of the On-call EOF Manager

Activation will be to the extent deemed necessary by the Emergency Director and On-call EOF Manager

DELETED

Figure 23

VI. NOTIFICATION PROCEDURES

FNP-0-EIP-8.1, "Emergency Phone Directory", contains a listing (updated quarterly) of the names, addresses, and telephone numbers of the individuals and organizations referred to in this section. A copy of FNP-0-EIP-8.1 will be maintained in the control room and by the on-call Emergency Director. Figure 24 illustrates the order and responsibilities for notification in the event of an emergency. An authentication method is used to verify any notifications made by FNP utilizing commercial telephones.

A. STATE AND LOCAL AGENCY NOTIFICATION

The Emergency Director is responsible for notifying the Alabama Emergency Management Agency and the Georgia Emergency Management Agency of all declared emergencies. The Alabama Emergency Management Agency will notify the Alabama Radiation Control Office of the State of Alabama Department of Public Health who will in turn notify the Florida Division of Emergency Management.

In addition to these State notifications, the Emergency Director will notify local emergency management agencies in Houston County, Alabama and Early County, Georgia utilizing the Emergency Notification Network or commercial telephone.

NMP-EP-111, "Emergency Notifications", contains the initial messages that will be used by the Emergency Director to notify the state and local agencies for the different classifications of emergencies. The content of emergency messages has been mutually agreed upon with State and Local agencies. The procedure to be followed for message authentication is contained in NMP-EP-111, "Emergency Notifications." These initial messages shall contain, at a minimum the following if applicable and available:

1. Class of emergency

2. Actual or potential release information

3. Potentially affected population

4. Advisability of protective measures

Required follow-up message information has been agreed upon by the states. NMP-EP-111 makes provisions for follow-up messages to be sent to the states. These messages contain the following information as appropriate:

1. Location of incident and name and telephone number (or communications channel identification) of caller

2. Date/time of accident

3. Class of emergency

4. Type of actual or projected release (airborne, liquid) and estimated duration times

5. Estimate of quantity of radioactive material released or being released and the height of release

6. Chemical and physical form of released material, including estimates of the relative quantities and concentrations of noble gases, iodines, and particulates

7. Meteorological conditions (wind speed, direction (from), stability classification; form of precipitation, if any)

8. Projected dose at site boundary

9. Projected dose at about 2, 5, and 10 miles

10. Emergency response actions underway

11. Recommended emergency actions, including protective measures in sector(s) affected

12. Prognosis for worsening or termination of event based on plant information

B. PLUME EXPOSURE PATHWAY EMERGENCY PLANNING ZONE PUBLIC NOTIFICATION AND INFORMATION

1. Notification

a. Primary

Southern Nuclear Operating Company has provided the administrative and physical means for alerting and providing prompt instructions to the public within the plume exposure pathway EPZ by providing an Alert and Notification System (ANS) for the entire plume exposure pathway EPZ. Primary alerting is accomplished by use of a siren system. The siren alerting system consists of 89 pole mounted sirens. Each siren operates on battery power with battery charge maintained through an inverter that receives power from the local electrical grid or from a solar panel. Each siren site contains two radios - one for the primary radio signal frequency operating in the UHF band and one for the backup radio frequency operating in the VHF band. Repeaters for the primary and backup radio frequencies are provided on two separate radio towers with associated power, control, and radio communication provided. Siren system activation, test, and monitoring panels are provided at each for the counties of Houston and Henry County, Alabama; one for Early County, Georgia; and one for the State of Georgia. Residents in the plume exposure pathway EPZ have been instructed to tune to specific emergency alert radio or TV stations if the sirens are activated.

Following activation of the siren system, emergency notifications will be made to the public within the 10 mile plume exposure pathway EPZ by activation of the Emergency Alert System (EAS). State and local Emergency Management Agencies will initiate activation of the local EAS stations through a dedicated EAS activation console. The EAS activation console provides a connection to designated EAS stations that allows for activation of the station through redundant communications pathways. Emergency messages are transmitted from the EAS activation console via phone line, internet, or satellite connections. Activation of the station does not require that the station be manned. Emergency messages are coordinated between the local Emergency Management Agencies and the State Emergency Management Agencies prior to activation of the local radio stations, as specified in the local area plans. A full description of the Farley ANS design is provided in the FEMA approved ANS Design Report (ANS-FNP-001) in the SNC document management system.

b. Special Alerting and System Backup

Special alerting is accomplished through the use of a calling system. Special alerting is initiated in the event of a failure of the system to activate multiple sirens resulting in a loss of coverage in any area. special alerting may be initiated for a predefined area, a user specified area, user defined groups, or the entire Emergency Planning Zone (EPZ). The calling system serves as a complete backup to the ANS. The system provides both alerting and notification of EPZ residents independent of the alerting capabilities provided by the installed siren system and notification capability of local radio and television stations through EAS. Capability for activation of the calling system is provided at each for the counties of Houston and Henry, Alabama, at Early, Georgia, and for the State of Georgia.

2. Information

Processes for dissemination of information to local news media and the public annually are discussed in the Emergency Communications Plan, Appendix 10(J).

3. News Release Coordination and Rumor Control

Processes for news release coordination and rumor control are discussed in the Emergency Communications Plan, Appendix 10(J).

C. NRC OFFICE OF INSPECTION AND ENFORCEMENT

The Emergency Director or his designee will notify the Nuclear Regulatory Commission of any emergency condition utilizing the Emergency Notification System.

D. SAVANNAH RIVER OPERATIONS OFFICE

If conditions warrant, immediate assistance will be requested by the Emergency Director from the DOE Savannah River Operations Office if their assistance is required to protect the health and safety of the general public.

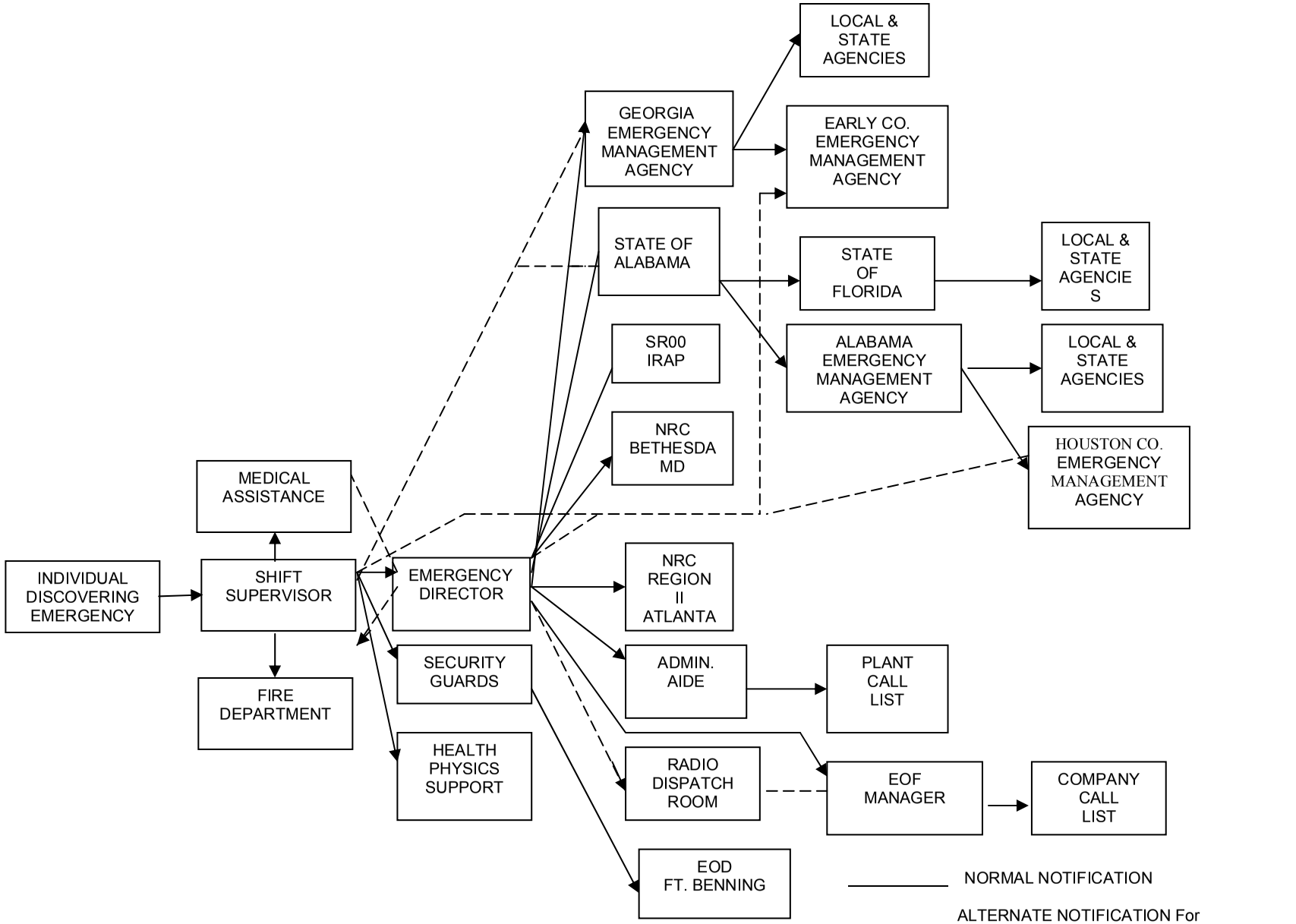
E. MEDICAL

Refer to:

III. FACILITIES AND EQUIPMENT; D. PROTECTION, DECONTAMINATION AND FIRST AID FACILITIES, Section 3. Medical Treatment

F. FIRE

This page intentionally left blank.



NOTIFICATION ORDER

Figure 24

VII. RECOVERY

A. METHODOLOGY

Due to the unforeseeable conditions that would exist in an emergency condition, specific recovery criteria and procedures will be developed when required, considering maximum protection for plant personnel and the general public consistent with reasonable efforts to restore the affected Unit and continuing operation of the unaffected unit.

The decision to relax protective measures will be based upon a comprehensive review of plant system parameters. These shall include but not be limited to the following:

1. Stability of the reactor shutdown condition i.e., successful movement toward a cold shutdown condition.

2. Integrity of the reactor containment building.

3. Operability of radioactive waste systems and decontamination facilities.

4. The availability and operability of a heat sink.

5. The integrity of power supplies and electrical equipment.

6. The operability and integrity of instrumentation including radiation monitoring equipment. In the latter instance this shall include portable equipment assigned to the emergency.

7. Availability of trained personnel and support services.

The Emergency Director will analyze the input from his advisors in the areas listed above to determine if plant restoration efforts can begin. The following criteria shall be considered appropriate for the consideration of relaxation of protective measures:

1. Plant parameters of operation no longer indicate a potential or actual emergency exists.

2. The release of radioactivity from the plant is controllable and no longer exceeds permissible levels and no danger to the public from this source is credible.

3. The plant is capable of sustaining itself in a long term shutdown condition.

4. Plant entry and clean-up is possible without workers receiving in excess of their permissible exposures.

B. ORGANIZATION

The recovery organization which will conduct the activities of returning the plant toward its pre-emergency condition to the extent reasonable is described in Section II.B.3.

C. NOTIFICATION

The Emergency Director shall notify the Vice President – Nuclear Plant Site and company management that a decision has been reached to initiate a recovery operation. The ED shall then notify offsite agencies' representatives ensuring the NRC, and state and local authorities are provided with the same information. He shall also inform these agencies if any change in the structure of the recovery organization is to occur.

VIII. MAINTAINING EMERGENCY PREPAREDNESS

A. EXERCISES AND DRILLS

Periodic drills and exercises will be conducted as described below. The scenarios for use in these drills will include the following elements:

- The basic objective,
- The date, time, place(s) and participating organizations,
- The simulated event,
- A time schedule of real and simulated events,
- A narrative summary describing conduct of the drill.

Monitoring personnel shall be stationed at various locations to observe each individual's ability to perform his assigned emergency function. During drills and Nuclear Regulatory Commission (NRC) non-evaluated exercises, on-the-spot correction of erroneous performance and a demonstration of proper performance may be made by the monitoring personnel.

1. Radiation Emergency Exercises

   a. Exercises simulating radiation emergencies will be conducted on a frequency consistent with 10 CFR 50, Appendix E.IV.F. These scenarios will be varied from exercise to exercise such that all major elements of the plans and emergency organizations are exercised at least once every 8 years. These exercises will be preplanned with the following purposes:

      1) To determine the effectiveness of the FNP emergency organization in handling emergencies,

      2) To evaluate communications and action support with offsite agencies,

      3) To evaluate the interface with and the response of the Company Emergency Organization,

      4) Test the adequacy, timing, and content of the EIPs,

      5) Test emergency equipment and communications networks,

      6) Test the public Alert and Notification System,

      7) Keep affected personnel aware of their role in the plan.

b. Both full-scale and small-scale exercises will be conducted and will include participation by appropriate State and local government agencies as follows:

1) A full scale exercises which tests as much of the Plant Farley, State, and local emergency plans as is reasonably achievable without mandatory public participation will be conducted on a biennial basis and evaluated by NRC and FEMA.

(a) Biennial exercise scenarios will be submitted to the NRC under § 50.4 at least 60 days before use in the biennial exercise.

(b) Each biennial exercise scenario will provide the opportunity for the ERO to perform their key skills, as applicable, to their emergency response duties in the CR, TSC, OSC, EOF, and joint information center to implement the EP principal functional areas.

(c) Biennial evaluated exercises will be varied such that the following scenario elements are demonstrated over the course of an 8-year exercise cycle:

- Hostile action directed at the plant site.
- No radiological release or an unplanned minimal radiological release that does not require public protective actions.
- Initial classification of or rapid escalation to a Site Area Emergency or General Emergency.
- Implementation of strategies, procedures, and guidance developed under 10 CFR 50.54 (hh)(2).
- Integration of offsite resources with onsite response.

(d) An ingestion pathway exercise will be conducted on a frequency to ensure the States have the opportunity to participate in an ingestion pathway exercise at least once every exercise cycle.

2) A small scale exercise will be conducted each year that a full scale drill is not conducted. This small scale exercise will include a combination of some of the principal functional areas of the licensee's onsite emergency response capabilities and tests at least one other component (e.g., medical or offsite monitoring) of the offsite emergency response plans for the company and State and local agencies within the plume exposure pathway EPZ. The principal functional areas of emergency response include:

- Event classification.
- Notification of offsite authorities.
- Management and coordination of emergency response.
- Accident assessment.
- Assessment of the onsite and offsite impact of radiological releases.
- Protective action recommendation development.
- Protective action decision making.
- Plant system repair and mitigative action implementation.

c. For Nuclear Regulatory Commission (NRC) evaluated exercises, the NRC will be provided with a description of exercise objectives at least 75 days prior to the exercise. Participation in the exercise by the NRC shall be at their discretion.

d. The Alabama Emergency Management Agency will provide FEMA with a description of exercise objectives at least 90 days prior to a FEMA evaluated exercise. Participation in the exercise by FEMA shall be at their discretion.

2. Drills

a. Periodic Emergency Drills

1) During each exercise cycle, periodic drills will be conducted to ensure the ERO teams (not necessarily each individual) are provided the opportunity to develop and maintain key emergency response skills within the scope of their duties. The ERO (not necessarily each ERO team) will be provided the opportunity to demonstrate key skills in response to the following scenario elements in drills or exercises.

- All functions in each ERF (e.g., all ERFs that are responsible for dose assessment perform those duties in response to a radiological release).
- Use of alternative facilities to stage the ERO for rapid activation during hostile action.
- Real-time staffing of facilities during off-hours (i.e., 6:00 p.m. to 4:00 a.m.).
- Providing medical care for injured, contaminated personnel (every 2 years).
- Response to essentially 100 percent of initiating conditions identified in the site emergency plan implementing procedure for classification of emergencies.
- Response to actual industry event sequences appropriate for the nuclear plant technology (e.g., PWR).
- Use of procedures developed in response to an aircraft threat and in compliance with 10 CFR 50.54 (hh)(1).
- Use of the strategies associated with 10 CFR 50.54 (hh)(2) to mitigate spent fuel pool damage scenarios (all strategies, such as makeup, spray, and leakage control, but not every variation of a given strategy).
- Use of the strategies associated with 10 CFR 50.54 (hh)(2) to mitigate reactor accidents and maintain containment.

b. Fire Drills

1) Fire Drills will be conducted with fire brigade members as required by the plant's FSAR.

2) Fire Drills will be conducted annually which will involve the Dothan Fire Department.

c. Medical Emergency Drills

A medical emergency drill will be conducted annually which will involve ambulance and offsite medical treatment facility participation.

d. Radiological Monitoring Drills

Radiological monitoring drills will be conducted annually which will include initiating onsite and offsite radiological monitoring of vegetation, soil, water, and air.

e. Health Physics Drills

Health Physics drills will be conducted semiannually which will involve response to simulated elevated airborne and liquid samples and direct radiation measurements in the plant environment. Analysis of reactor coolant samples including use of the post accident sampling system will be conducted annually.

f. Appropriate local, state, and federal agencies will be advised of major drills in advance to allow their observation or participation. All observing or participating agencies will be requested to provide comments on drill evaluation and it will be the responsibility of the Plant Manager to implement corrective action as appropriate.

3. Evaluations and Corrective Actions

A formal critique will be performed for all exercises, drills, and training that provide performance opportunities to develop, maintain, or demonstrate key skills in order to identify weak or deficient areas that need correction. All observing or participating agencies will be requested to provide comments on drill evaluation. Any weaknesses or deficiencies that are identified in a critique of exercises, drills, or training will be corrected. Corrective action, as appropriate, for company onsite and offsite weaknesses shall be the responsibility of the Vice President-Nuclear Plant Site. Corrective action, as appropriate, for company public information weaknesses shall be the responsibility of the APC Public Relations Senior Vice President and the SNC Vice President and General Counsel.

B. TRAINING

1. Training of the Plant Emergency Organization

All Farley Nuclear Plant personnel, including those assigned on a temporary basis or in a training status, will receive a thorough orientation on all emergency plans and procedures required to ensure their safety. Changes in emergency plans and EIPs applicable to all plant personnel will be presented using training notices or other appropriate means. Persons with specific duties during an emergency will receive additional training appropriate to their respective assignments. The responsibility for coordinating their training is that of the Plant Training Manager.

Continuing training will be provided to all personnel as described below:

Specific training that will be conducted is listed below:

a. Emergency Director Training (annually)
members of the plant staff who may serve as Emergency Director will receive training in:

1) Supervision of emergency teams,

2) Emergency assessment including interpretation of data and estimation of radiation exposure,

3) Coordination and communication with offsite groups.

b. Field Monitoring Team Training (annually)

This training will be given to plant and vendor personnel that may be required to perform surveys in-plant, on the environment, or at SAMC. It will include instruction in the selection and use of survey instruments and air sampling equipment and in re-entry criteria.

c. First Aid Training (triennially)

Plant personnel will be considered first aid qualified upon successful completion of the Company's - First Aid and CPR Course.

d. Fire Control (per FSAR requirements)

A training program for the plant employees that serve on fire fighting teams is conducted under the direction of the Plant Training Manager. This course covers methods and equipment for fighting all types of fires that could occur on the site. Appropriate emphasis is placed on the radiological aspects of fire fighting. Drills and critiques are conducted periodically to train Fire Brigade personnel and to maintain their efficiency.

e. Emergency Repair Party Training (annually)

Maintenance and I and C personnel who may be assigned to the Emergency Repair Party receive training in Radiation Control Procedures as part of their normal plant training. Personnel selected for Emergency Repair Party work will possess the required journeyman skills for the particular activity.

f. Security Personnel (annually)

Security personnel will receive training on FNP-0-EIP-7, "Security Support to the Emergency Plan", including personnel evacuation and accountability, access control, vehicle escort, and bomb search activities. Personnel will also receive training on Contingency Implementing Procedure 13 covering security activities during fire, explosion, or other catastrophe.

g. Communications Personnel (annually)

Personnel responsible for the transmission of emergency information and instructions will receive training in accordance with Appendix 10(J).

2. Training of the Corporate Emergency Organization

Information related to corporate emergency organization training is provided in Appendix 7(G).

3. Training of Local Services Groups

   Offsite groups, such as fire departments, police and sheriff's departments, and ambulance services, that may participate in onsite activity will be encouraged to attend a training course to ensure that they are familiar with the plant layout and their actions in the event of radiological and non-radiological incidents. The Plant Training Manager is responsible for coordinating this training.

4. Training of SNC Emergency Planners

   The EP Supervisor, Emergency Planning Coordinator, and other individuals with emergency planning responsibilities are trained by self-study and by attending industry seminars, short courses, workshops, etc.

C. INSPECTION, CALIBRATION AND TESTING OF EMERGENCY EQUIPMENT AND SUPPLIES

To insure the operational readiness of emergency supplies and equipment the following will be performed:

1. Periodic calibration using manufacturers' recommendations as guidelines on all portable emergency instrumentation designated for emergency use. This includes both onsite equipment and offsite equipment at SAMC supplied by APC/SNC.

2. Inspection quarterly of all onsite and SAMC emergency equipment and supplies designated for emergency use and supplied by APC/SNC. The purpose of the inspection is to ensure that the inventory is correct, that the supplies are functional and that instrument calibration is current.

3. An adequate reserve of emergency equipment will be maintained to allow for equipment taken out of service for repair, calibration, or replacement.

4. Communications Checks

    a. Communications checks will be performed monthly with all locations which are part of the Emergency Notification Network.

    b. The Emergency Notification System shall be tested at least monthly.

    c. The telephone numbers of organizations listed in FNP-0-EIP-8.1 will be updated quarterly and verified annually.

    d. The EOF/TSC/OSC conference capability will be tested at least annually.

    e. Radio communication equipment for Field Monitoring Team communications will be tested at least annually.

    e. The public Alert and Notification System will undergo a full activation test at least annually.

D. REVIEW AND UPDATING OF THE PLAN AND PROCEDURES

Responsibility for the planning effort, including review and updating of the emergency plans and procedures, is described in Appendix 9(I).

APPENDIX 1(A)

EMERGENCY SUPPLIES AND EQUIPMENT

I. TECHNICAL SUPPORT CENTER

Emergency Plan

Emergency Plan Implementing Procedures

Drawings of Facility and Plant Site

Records Material

First Aid Kit

II. CONTROL ROOM

Emergency Plan

Emergency Plan Implementing Procedures

Records Material

Tools and Other Hardware

Stretcher

First Aid Kit

Respiratory Protection Equipment

Survey Instruments

Self Contained Breathing Apparatus

III. OPERATIONS SUPPORT CENTER

Survey Instruments

Dosimetry Devices

Respiratory Protection Equipment

Protective Clothing

IV. CENTRAL SECURITY CONTROL (CSC) BUILDING

Ambulance Kit

Respiratory Protection Equipment

V. EMERGENCY OPERATIONS FACILITY

Refer to Appendix G

First aid kit

Flashlights

Clipboards, writing materials, and secretarial supplies

EPZ/IPZ maps

VI. AUXILIARY BUILDING

Protective Clothing

Decontamination Supplies

Signs and Labels

Respiratory Protection Equipment

First Aid Kit and Supplies

Stretchers

Fire Rescue Suit

Fire Brigade Equipment

APPENDIX 2(B) INDEX

Letters of Agreement on File

The following letters of agreement and memorandums of understanding are maintained on file:

Agreement Between Department of Pensions and Security of the State of Alabama, Alabama Department of Public Health, Alabama Emergency Management Agency and Alabama Power Company

Memorandum of Understanding Between Southern Nuclear Operating Company and Georgia Emergency Management Agency and Georgia Department of Natural Resources Environmental Protection Division and Early County Sheriff's Department and Chairman, Early County Commission and Mayor, City of Blakely Regarding Notifications Associated with a Radiological Emergency at the Joseph M. Farley Nuclear Plant

Media Center Lease Agreement

Agreement for Back-up Fire Protection Services Between the City of Dothan, Alabama and Southern Nuclear Operating Company

Letter — INPO – Certifying plant emergency assistance agreements between INPO and member utilities remain in effect as described in the INPO Emergency Resources Manual located on the INPO website. Agreements include:

- Nuclear Power Plant Emergency Response Voluntary Assistance Agreement
- Voluntary Assistance Agreement by and Among Electric Utilities Involved in Transportation of Nuclear Materials

Letter — Department of Energy

Letter of Agreement with Houston County EMA

Letter – Southeast Alabama Medical Center

Letter – Radiation Emergency Assistance Center Training Site (REAC/TS)

Agreement For Notification of the State of Florida of a Radiological Emergency at the J. M. Farley Nuclear Plant

Assignment of Emergency Planning Agreements

Memorandum of Understanding Between Southern Nuclear Operating Company and Alabama Emergency Management Agency and Alabama Department of Public Health office of Radiation Control and Houston County Sheriff’s Department and Chairman, Houston County Commission, and Mayor, City of Dothan Regarding Notifications Associated with a Radiological Emergency at the Joseph M. Farley Nuclear Plant

APPENDIX 3(C)

RADIATION MONITORING SYSTEM

The Radiation monitoring system is divided into three areas. These areas and the channels comprising each area are shown below. The monitors are installed on Units 1 and 2 unless otherwise noted.

1. Area Radiation Monitors

Channel	Description	Range
R-1	Control Room	1×10^{-4} to 1×10^{1} R/hr
R-1B	Technical Support Center	1×10^{-4} to 1×10^{1} R/hr
R-2	Containment	1×10^{-4} to 1×10^{1} R/hr
R-3	Radiochemistry Lab	1×10^{-4} to 1×10^{1} R/hr
R-4	Charging Pump Room	1×10^{-4} to 1×10^{1} R/hr
R-5	Spent Fuel Bldg.	1×10^{-4} to 1×10^{1} R/hr
R-6	Sampling Room	1×10^{-4} to 1×10^{1} R/hr
R-7	In-core Instrumentation Room	1×10^{-4} to 1×10^{1} R/hr
R-8	Drumming Station	1×10^{-4} to 1×10^{1} R/hr
R-9	Sample Panel Room (Unit 2)	1×10^{-4} to 1×10^{1} R/hr
R-30	Radwaste Area Ventilation return from 100 foot elevation and below	10 to 10^{6} cpm
R-31	Radwaste Area Ventilation return from 121 foot elevation	10 to 10^{6} cpm
R-32	Radwaste Area Ventilation return from 139 foot elevation	10 to 10^{6} cpm
R-33	Radwaste Area Ventilation return from 155 foot elevation	10 to 10^{6} cpm

Channel	Description	Range
R-34	Access Control Area Ventilation Return (Unit 1 only)	10 to 106 cpm
R-35 (A,B)	Computer Room Air Handling Unit Air Intake (common for both units)	10 to 10^6 cpm

2. Process Radiation Monitors

R-10	Penetration Room Filtration Discharge Monitoring System	1×10^{-9} to 1×10^{-6} uCi/cc
R-11	Containment Atmosphere Monitoring System	1×10^{-9} to 1×10^{-6} uCi/cc
R-12	Containment Atmosphere Monitoring System	1 x 10-6 to 1 x 10-3 uCi/cc
R-13	Waste Gas Processing System	1×10^{-1} to $1 \times 10^{+4}$ uCi/cc
R-14	Plant Vent Gas Monitoring System	5×10^{-7} to 1×10^{-4} uCi/cc
R-15A	Condenser Air Ejector Monitoring System	1×10^{-6} to 1×10^{-3} uCi/cc (5×10^{-7} for Kr-85)
R-17 (A,B)	Component Cooling Water Monitoring System	1×10^{-5} to 1×10^{-2} uCi/cc
R-18	Liquid Waste Processing Monitoring System	1×10^{-5} to 1×10^{-2} uCi/cc
R-19	S/G Blowdown Processing Monitoring System	1×10^{-5} to 1×10^{-2} uCi/cc
R-20 (A,B)	Service Water Leaving Containment Monitoring System	1×10^{-5} to 1×10^{-2} uCi/cc
R-21	Vent Stack Monitoring System	1×10^{-9} to 1×10^{-6} uCi/cc
R-22	Vent Gas Monitoring System	5×10^{-7} to 1×10^{-4} uCi/cc

Channel	Description	Range
R-23 (A,B)	Steam Generator Blowdown Processing Monitoring System	1 x 10^{-6} to 1 x 10^{-3} uCi/cc
R-24 (A,B)	Containment Purge Monitoring System	1 x 10^{-6} to 1 x 10^{-3} uCi/cc
R-25 (A,B)	Fuel Handling Monitoring System	1 x 10^{-6} to 1 x 10^{-3} uCi/cc
R-26 (A,B)	Recycle and Waste Evaporator Auxiliary Steam Supply System	1.0x10^{-6} to 1.0 x 10^{-3} uCi/cc

3. High Range Radiation Monitors

R-15B	Condenser Air Ejector Exhaust Monitoring System	.01 - 100 mR/hr
R-15C	Condenser Air Ejector Exhaust Monitoring System	.01 - 1000 R/hr
R-27 (A,B)	Containment High Range Monitoring System	1 to 10^{7} R/hr
R-29B	Plant Vent Stack High Range Monitoring System	Per FSAR Table 11.4-2 and FSAR section 11.4.2.20
R-60A	A Steam Generator Relief & Safety Valve Monitoring System	Per FSAR Table 11.4-2 and FSAR section 11.4.2.20
R-60B	B Steam Generator Relief & Safety Valve Monitoring System	Per FSAR Table 11.4-2 and FSAR section 11.4.2.20
R-60C	C Steam Generator Relief & Safety Valve Monitoring System	Per FSAR Table 11.4-2 and FSAR section 11.4.2.20
R60D	T.D. Aux. Feedwater Pump Steam Exhaust Monitoring System	Per FSAR Table 11.4-2 and FSAR section 11.4.2.20

APPENDIX 4(D)

I. EMERGENCY PLAN PROCEDURES

A. Emergency Plan Implementing Procedures (EIPs) Listing

FNP-0-EIP-0.0	Emergency Organization
FNP-0-EIP-1.0	Duties of An Individual Who Discovers an Emergency Condition
FNP-0-EIP-2.0	Handling of Incoming Calls During Emergencies or Emergency Exercises
FNP-0-EIP-4.0	Health Physics Support to the Emergency Plan
FNP-0-EIP-5.0	Maintenance Support to the Emergency Plan
FNP-0-EIP-6.0	TSC Setup and Activation
FNP-0-EIP-7.0	Security Support to the Emergency Plan
FNP-0-EIP-8.0	Non-Emergency Notifications
FNP-0-EIP-8.1	Emergency Phone Directory
FNP-0-EIP-8.2	Plant Personnel Home Telephone Directory
FNP-0-EIP-8.3	Communications Equipment Operating Procedures
FNP-0-EIP-9.1	Automated Dose Assessment Method
FNP-0-EIP-9.5	Determining Technical Specifications/ODCM Radioactive Release Values
FNP-0-EIP-10.0	Evacuation, Personnel Accountability, and Site Dismissal
FNP-0-EIP-11.0	Handling of Injured Personnel
FNP-0-EIP-13.0	Fire Emergencies
FNP-0-EIP-14.0	Emergency Response Teams
FNP-0-EIP-16.0	Emergency Equipment and Supplies
FNP-0-EIP-20.0	Chemistry and Environmental Support to the Emergency Plan
FNP-0-EIP-28.0	Termination and Recovery
FNP-0-EIP-30.0	Post Accident Core Damage Assessment

NMP-EP-101	Emergency Operations Facility (EOF) Activation
NMP-EP-102	EOF Manager
NMP-EP-103	Licensing Support
NMP-EP-104	Dose Assessment
NMP-EP-105	EOF Technical Supervisor
NMP-EP-106	EOF Support Coordinator
NMP-EP-107	Security Coordinator
NMP EP-108	Offsite Response Coordinator
NMP-EP-110	Emergency Classification Determination and Initial Actions
NMP-EP-111	Emergency Notifications
NMP-EP-112	Protective Action Recommendations
NMP-EP-135	Alternative Facility Setup and Operation

B. Radiation Control Procedures (RCPs)

FNP-0-RCP-7	Coordinated Exposure Reduction Program
FNP-0-RCP-25	Health Physics Activities During a Radiological Accident
FNP-0-RCP-26	Radiological Surveys and Monitoring
NMP-HP-110	HIS-20 Health Physics Information System Overview
NMP-HP-206	Issuance, Use, and Control of Radiation Work Permits
NMP-HP-300	Radiation and Contamination Surveys
NMP-HP-303	Personnel Decontamination
NMP-HP-304	Decontamination of Areas, Tools, and Equipment

C. Chemistry-Radiochemistry Control Procedures (CCPs)

FNP-1/2-CCP-1300	Chemistry and Environmental Activities during a Radiological Accident

D. Administrative Procedures (APs)

FNP-0-AP-45	Farley Nuclear Plant Training Plan
NMP-AP-001	Development and Control of Southern Nuclear Procedures
NMP-ES-035-010	Fire Brigade

II. EMERGENCY PLAN/IMPLEMENTING PROCEDURE CROSS REFERENCE

The following listing indicates for each plan section the procedures that implement actions required by Southern Nuclear Operating Company.

PLAN SECTION	APPLICABLE IMPLEMENTING PROCEDURES
I. Introduction	N/A
II. Organization	
A. Onsite	
1. TSC	
a. Emergency Director	EIP-0 NMP-EP-110
b. Operations Supervisor	EIP-0, 6
c. Maintenance Supervisor	EIP-0, 6 EIP-5, 6
d. Health Physics Supervisor	EIP-0, 6 EIP-4
e. Security Supervision	EIP-7
f. Engineering Supervisor	EIP-0, 6 EIP-6
g. Shift Supervisor (Emergency Director)	EIP-0 NMP-EP-110
h. Emergency Repair Party	EIP-5 EIP-14
i. Field Monitoring Team	EIP-4
j. Dose Assessment Staff	EIP-6 EIP-9 Series
k. Additional Plant Staff Assignments	
1) Operations Support Center (OSC) Manager	EIP-0
2) Radiological Monitoring	EIP-4
3) Fire Fighting and Rescue	EIP-13
4) First Aid	EIP-11
5) Decontamination	EIP-4
6) Personnel Accountability	EIP-10
7) Record Keeping	EIP-6
8) Communications	EIP-2, 8 Series NMP-EP-111

PLAN SECTION	APPLICABLE IMPLEMENTING PROCEDURES
B. Offsite	
1. Emergency Operations Facility (EOF)	
a. Corporate Duty Manager.....	NMP-EP-001, 002
b. EOF Manager.....	NMP-EP-101, 102
c. EOF Support Coordinator.....	NMP-EP-001, NMP-EP-106
d. EOF Technical Supervisor.....	NMP-EP-001, NMP-EP-105
e. Licensing Support Manager.....	NMP-EP-001, 103
2. Emergency Communication Organization.....	NMP-EP-201 NMP-EP-202 NMP-EP-203 NMP-EP-204 NMP-EP-205 NMP-EP-206
3. Recovery Phase Organization.....	EIP-28.0
a. Recovery Manager.....	EIP-28.0 EIP-28.0
b. Recovery Support Director.....	EIP-28.0
c. Technical Support Director.....	EIP-28.0
d. Recovery Support Supervisor.....	EIP-28.0
e. Administrative Support Supervisor.....	EIP-28.0
f. Engineering Supervisor.....	EIP-28.0
g. Licensing Supervisor.....	EIP-28.0

PLAN SECTION	APPLICABLE IMPLEMENTING PROCEDURES
C. Outside Organizations	
1. Government Agencies	EIP-8.1, NMP-EP-111
a. Department of Energy Savannah River Operations Office	NMP-EP-110
b. Nuclear Regulatory Commission	NMP-EP-110/111
c. State of Alabama	NMP-EP-111
d. State of Georgia.....	NMP-EP-111
e. State of Florida	NMP-EP-111
f. Houston County, Alabama.....	NMP-EP-111
g. Early County, Georgia.....	NMP-EP-111
h. City of Dothan, Alabama Fire Department.....	EIP-13 NMP-EP-110
2. Contractor and Private Offsite Organizations	
a. Southern Company Services.....	N/A
b. Bechtel Power Corporation.....	N/A
c. Westinghouse.....	N/A
d. INPO, NEI, EPRI.....	N/A
e. Maintenance Assistance.....	N/A
f. Radiological Monitoring Assistance.....	N/A
g. Other Utilities.....	N/A
III. Facilities and Equipment	
A. Control Centers	
1. Technical Support.....	EIP-0 EIP-6
2. Emergency Operations Facility.....	NMP-EP-101
3. Operations Support Center.....	EIP-0 EIP-10
4. Alternative Facility……	NMP-EP-135
5. Joint Information Center.....	NMP-EP-204
6. Corporate Media Center.....	NMP-EP-203
B. Communications Systems	
1. Commercial Telephones.....	N/A
2. Private Automatic Exchange.....	N/A
3. Microwave.....	N/A
4. APC Load Dispatch Computer Link.....	N/A
5. Two-Way Radio.....	EIP-8.3
6. Public Address and Party Lines.....	EIP-8.3 NMP-EP-111
7. Sound Powered Telephone.....	N/A
8. Plant Emergency Alarm.....	N/A
9. NRC Emergency Notification System.....	EIP-8.3
10. NRC Health Physics Network.....	EIP-8.3
11. State/Local Agency Emergency Notification Network....	EIP-8.3 NMP-EP-111
12. RSCL.....	N/A
13. PMCL.....	N/A
14. MCL.....	N/A
15. LAN.....	N/A
16. Telecopier.....	NMP-EP-111
17. SNC Integrated Data Display System.....	N/A
18. ERDS.....	NMP-EP-111
19. Other Communication Systems.....	EIP-8.3 NMP-EP-003

PLAN SECTION	APPLICABLE IMPLEMENTING PROCEDURES
C. Assessment Facilities	
1. Onsite Systems and Equipment	
a. Natural Phenomena Monitors	N/A
b. Radiological Monitors.....	EIP-16 EIP-30
c. Post Accident Sampling Facilities.....	FNP-1/2-CCP-1300
d. Fire Detection	N/A
2. Environs Monitoring Facilities and Equipment.....	RCP-25 FNP-0-M-7 EIP-9 Series
D. Protection, Decontamination and First Aid Facilities	
1. Protective Facilities and Equipment.....	EIP-10
2. Decontamination and First Aid	EIP-11
3. Medical Transportation	EIP-11
4. Medical Treatment.....	N/A
IV. Assessment Actions and Protective Measures	
A. Classification of Emergencies.	NMP-EP-110
1. Notification of Unusual Event.....	NMP-EP-110
2. Alert.....	NMP-EP-110
3. Site Area Emergency Alert.....	NMP-EP-110
4. General Emergency Alert.....	NMP-EP-110
B. Post Accident Assessment Actions	
1. Reactor Coolant Sampling, Containment Atmosphere Sampling and Plant Vent Stack Sampling Alert.....	EIP-20 CCP-1300 EIP-30
2. Surveillance of Control Room Monitors Alert.....	EIP-6
3. In-Plant and Site Surveys Alert.....	EIP-4 RCP-25
4. Population Exposure.....	
5. Environs Surveys and Monitoring	
a. Short Term Assessment Exposure.....	EIP-4 EIP-9 Series RCP-25
b. Long Term Assessment.....	NMP-EP-104

PLAN SECTION	APPLICABLE IMPLEMENTING PROCEDURES
C. Protective Actions and Emergency Action Levels	
1. Onsite Protective Action	
a. Evacuation	EIP-10
b. Personnel Accountability	EIP-7 EIP-10
c. Contamination and Exposure Control Measures.....	EIP-4 EIP-7 EIP-10 EIP-11 EIP-14 RCP-7 RCP-26 NMP-HP-110 NMP-HP-206 NMP-HP-300 NMP-HP-303 NMP-HP-304
2. Offsite Protective Action.....	NMP-EP-111 NMP-EP-112
a. Classification of Offsite Incidents.....	NMP-EP-110
b. Response	NMP-EP-110
V. Activation of Emergency Organization	
A. Declaration of an Emergency	NMP-EP-110
B. Onsite Organization Activation	NMP-EP-110
1. Technical Support Center Activation	EIP-6 EIP-8.1
2. Operations Support Center Activation	EIP-0, 6 EIP-7 EIP-10
C. Offsite Corporate Organization Activation	NMP-EP-101 NMP-EP-202
D. Offsite Local, State and Federal Agencies	N/A
VI. Notification Procedures	
A. State and Local Agency Notification	EIP-8.1 NMP-EP-111
B. Plume Exposure Pathway Planning Zone Public Notification and Information	
1. Notification	N/A
2. Information	N/A
3. News Release Coordination and Rumor Control.	NMP-EP-201 NMP-EP-205/206
C. NRC Office of Inspection and Enforcement	NMP-EP-110/111
D. Savannah River Operations Office	EIP-8.1
E. Medical	EIP-8.1 NMP-EP-110
F. Fire	EIP-8.1 NMP-EP-110 NMP-ES-035-010

PLAN SECTION	APPLICABLE IMPLEMENTING PROCEDURES
VII. Recovery	
A. Methodology	EIP-28.0
B. Organization	EIP-28.0
C. Notification	EIP-28.0
VIII. Maintaining Emergency Preparedness	
A. Exercises and Drills	NMP-EP-300 NMP-EP-303
B. Training	AP-45 NMP-EP-301 FNP Security Plan
C. Inspection, Calibration and Testing of Emergency Equipment and Supplies.....	EIP-8.3 NMP-EP-303 EIP-16 NMP-EP-300
D. Review and Updating of the Plan and Procedures	NMP-EP-300

APPENDIX 5(E)

EVACUATION TIME ESTIMATES FOR THE FARLEY NUCLEAR PLANT

In order to ensure the safety of the public living in the vicinity of nuclear power plants in the nation, the U.S. Nuclear Regulatory Commission (NRC) requires licensees to develop and update evacuation times estimates (ETEs) for areas within the emergency planning zone (EPZ). Updates are required following the availability of data from the decennial census (10 years) or when the sensitivity factor for changes in population within the EPZ has been exceeded. Population reviews will be conducted annually using the most recent US Census and local information. This appendix contains information from the ETE update performed in 2012. This update implements the requirements of the revised regulations relevant to ETE updates in accordance with the guidance provided in NUREG/CR-7002, *Criteria for Development of Evacuation Time Estimate Studies*

Southern Nuclear Operating Company (SNC) contracted IEM to estimate evacuation times for the 2012 populations within the 10-mile plume exposure pathway emergency planning zone (EPZ) surrounding the Joseph M. Farley Nuclear Plant (FNP). This appendix provides a summary of the final report describing the methods used to obtain population data and to estimate evacuation times and estimated population figures, evacuation road network information, and ETEs.

The report provides a breakdown of the population by geographic areas and protective action zones (PAZ).[1] Five categories of population are identified in the report:

- Permanent residents
- Transient population
- Transit dependent permanent residents
- Special facility residents
- Schools.

The permanent resident population is made up of individuals residing in the 10-mile EPZ. The total year 2012 permanent resident populations within the 10-mile EPZ for FNP are estimated to be 7,188. The transient population consists of workers employed within the area, recreational sportsmen, and visitors. The total transient population within the 10-mile EPZ is estimated to be 4,734, which includes 600 transient workers at FNP. The school populations identified in the FNP EPZ include six schools, which are a combination of both public and private. In these analyses, IEM contacted the schools within the EPZ area to collect current enrollment and staff figures. The total peak population for the schools in the 10-mile EPZ is estimated to be 3,225. Transit dependent permanent residents in the 10-mile EPZ are estimated to be 94. This study also considered the voluntary evacuees, who are also known as shadow evacuees and consist of 20% of the residents within 10 to 15 miles from FNP.

1 NRC *Criteria for Development of Evacuation Time Estimate Studies*. NUREG/CR-7002. November 2011.

IEM utilized a computer traffic simulation model, PTV Vision VISUM, to perform the ETE analyses. For the analyses, the 10-mile plume exposure pathway EPZ was divided into 25 unique geographic areas based on two-mile, five-mile, and ten-mile radius rings, the 16 22.5-degree PAZs, as well as keyhole and staged evacuation logic. In order to represent the most realistic emergency scenarios, evacuations for the 25 geographic evacuation areas were modeled individually for the midweek daytime, midweek – weekend evening, and weekend daytime scenarios. Each of these scenarios was then considered under both normal and adverse weather conditions using the 2012 population projections. A total of 150 evacuation scenarios were considered as part of this study to represent different wind, temporal, and seasonal weather conditions.

Both 100% and 90% ETEs for each scenario were collected. The 100% ETEs for 2012 normal weather conditions ranged from 2 hours to 3 hours 20 minutes. The 100% ETEs for 2012 adverse weather conditions ranged from 2 hours 5 minutes to 3 hours 25 minutes. The 90% ETEs for 2012 normal weather conditions ranged from 1 hour 15 minutes to 1 hour 50 minutes. The 90% ETEs for 2012 adverse weather conditions ranged from 1 hour 20 minutes to 1 hour 50 minutes. The factors that contributed to the variations in ETEs between scenarios include differences in the number of evacuating vehicles, the capacity of the evacuation routes used, the type of warning systems within the zones, or the distance from the origin zones to the EPZ boundary.

Based on the data gathered and the results of the evacuation simulations, the existing evacuation strategy was determined to be functional for the 2012 conditions, given the lack of severe congestion or very high ETEs. Recommendations were provided for enhancements to improve the evacuation time estimate.

Assumptions utilized in the ETE will be reviewed when evaluating changes to roadways or evacuation networks to ensure the results of the ETE remain valid. Changes in population will be evaluated utilizing the sensitivity factor developed during the ETE analysis.

The full Evacuation Time Estimate was submitted for NRC review in accordance with NRC regulations (Evacuation Time Estimate (ETE) Updates 10 CFR 50, Appendix E, Section IV.3). Following the NRC review, the results of the study and recommendations will be reviewed with applicable offsite agencies. The review will focus on the utilization of the results of the evacuation simulations provided in the ETE for comparison to existing protective action strategies. Modifications, if any, will be incorporated as part of the ongoing emergency planning process. SNC will work with OROs and maintain a protective action strategy using the applicable portions of NUREG 0654 Supplement III. (Reference: Evacuation Time Estimates Update dated November 26, 2013 NL-13-2340; ETE Report ETE-FNP-001; Annual ETE Review ETE-FNP-002.

APPENDIX 6(F)

SUPPORTING EMERGENCY PLANS

Plan	**Source**
NUREG 0728 NRC Incident Response Plan	U.S. NUCLEAR REGULATORY COMM.
Emergency Response Plan Water Reactors Division Westinghouse Electric Corporation	WESTINGHOUSE ELECTRIC CORP.
Inter Agency Radiological Assistance Plan U.S. Department of Energy Region 3 (For interim use and guidance)	U.S. DEPARTMENT OF ENERGY
State of Georgia Radiological Emergency Plan	STATE OF GEORGIA
Alabama Radiological Emergency Response Plan for Nuclear Power Plants	STATE OF ALABAMA
State of Florida Radiological Emergency Plan for Fixed Nuclear Facilities	STATE OF FLORIDA

APPENDIX 7(G)

EMERGENCY OPERATIONS FACILITY

A. INTRODUCTION

A.1 PURPOSE

The purpose of this appendix is to outline the function of the Emergency Operations Facility for the Southern Nuclear Operating Company (SNC). Additionally, this appendix delineates the actions to be taken by SNC Corporate Staff in the event of an emergency at any (SNC) site.

A.2 SCOPE AND APPLICABILITY

This appendix provides the framework for operations of the EOF for SNC. This appendix is an integral part of the site specific emergency plan(s).

This appendix may be implemented to coordinate a SNC response to an emergency at any SNC facility or in response to a transportation accident involving radioactive material.

Additionally, this appendix provides the mechanism for obtaining and providing additional emergency response support and resources to SNC site(s) in the event of an emergency.

The SNC Corporate Staff will be responsible for offsite emergency response support and resources as requested. Overall management of the emergency will be accomplished at the specific site(s)[Vogtle Electric Generating Plant (VEGP), Hatch Nuclear Plant (HNP) and Farley Nuclear Plant (FNP)].

A.3 SUMMARY

The site specific Emergency Plan, is activated by the Emergency Director (ED). Upon notification of an ALERT or higher classification or as directed by the ED, the EOF will be activated as described in emergency implementing procedures. When notified, the designated corporate emergency organization management report to the EOF to be briefed on current conditions and perform their assigned tasks. Each manager's support staff will operate from that group's office area. Offsite support personnel and equipment will be dispatched to the site Operations Support Center (OSC) or Technical Support Center (TSC)upon request from the specific site Emergency Director. The corporate emergency organization will provide offsite emergency response support and resources to SNC sites 24 hours per day until the emergency has been terminated.

The EOF will be activated for an ALERT, SITE AREA or GENERAL emergency classification. This facility will be operational within about an hour of the initial notification. SNC’s goal is to begin notification of all required on-call Emergency Response Organization (ERO) personnel as soon as practicable, within 15 minutes, following the declaration of an Alert emergency or higher emergency classification at any SNC site. Minimum EOF staff for facility activation will include the EOF Manager, the Dose Assessment Supervisor, the Dose Analyst, the Field Team Coordinator, the ENN Communicator, and the Licensing Support Coordinator.

Access control for the EOF is established through the use of electronic card readers.

During the emergency, the emergency director will normally be located in either the TSC or Control Room at his/her option. The emergency director is responsible for the management of the emergency response. Specific duties and responsibilities are provided in the site specific Emergency Plan and Emergency Plan Implementing Procedures.

SNC has taken precautions to ensure that the EOF can be quickly accessed and made operational within about an hour of the initial notification and is safe-guarded against unauthorized personnel. The common EOF is located in a secure building. The building itself has posted security guards and video surveillance cameras. Any outside doors that do not have security guards are accessible only by SNC ID badges. Additionally, the EOF facility door is accessible only to people with ID badges that have been pre-approved for access. If an event were to occur during off-normal hours, a guard will be posted at the main entrance to Building 40 to allow access to offsite agency or other responders without pre-designated ID access.

B. EOF ORGANIZATION

The EOF Organization consists of selected management and staff members located in the SNC Corporate Office. This organization is responsible for providing offsite emergency response support and resources, as needed. The EOF Organization is displayed in Figure 1 and typical duty assignments are shown on Table 1. This organization may be supplemented or reduced by the EOF Manager, as required, to respond to the specific emergency situation but will not be reduced to below the minimum staff as specified in A.3 above.

SNC normally maintains ERO positions in a duty rotation. Several positions have been designated as plant specific and, as such, have personnel designated for each of the 3 sites. Specifically each of the following EOF positions has site-specific personnel designated:

- EOF Manager

- EOF Technical Supervisor

In order to augment additional staff that may be needed in the unlikely event of a multi-site accident, SNC will re-activate its ERO notification system. When the EOF is activated, all EOF staff pagers are activated, and all EOF personnel are expected to report to the EOF. Personnel that are not needed to augment positions are briefed and dismissed with a stand-by status.

B.1 EMERGENCY OPERATIONS FACILITY (EOF) MANAGER

The EOF Manager manages the following activities:

- Overall direction and control of the offsite response for SNC
- Communication of radiological information to State and local emergency response agencies as needed
- After consultation with the ED, provides support for initial activities associated with planning for recovery operations.

The duties and responsibilities of the EOF Manager will be assumed by designated SNC corporate personnel. The designated individual will be assigned according to a predetermined rotation schedule and will typically have either previous plant specific operational expertise or long-term supervisory/management experience.

The duties and responsibilities of the EOF Manager are as follows:

1. Manage the EOF and direct the activities of the EOF organization.
2. Ensure activation of the EOF at ALERT or higher classification, or as directed by the ED.
3. Support site efforts for the following:
   - Determining the cause of the incident.
   - Assessing the overall damage, including personnel, equipment, systems, facilities and/or fuel.
   - Developing recovery plans.
4. Keep corporate management informed regarding the emergency response and emergency classification upgrades.
5. Ensure that the joint owners, as applicable, are kept appraised of significant changes in the emergency status including upgrades and terminations.

6. Keep the GPC/APCO public information director fully appraised regarding the status of the emergency.
7. Identify the available resources within and outside the company to assist in mitigation and recovery, as necessary.
8. Procure outside services and equipment, as necessary.
9. Obtain assistance from SNC Environmental Services regarding non-radiological and hazardous materials environmental considerations.
10. Request assistance from legal counsel as appropriate.
11. Coordinate NRC inquiries/activities requiring a response from the Corporate Office. Obtain licenses and/or amendments to licenses, if required, for repair of the affected unit and disposal of waste products.
12. Approve news releases issued from the Emergency Response Center (ERC) or the Joint Information Center (JIC).
13. Communicate developed PARs to the ED once offsite communication responsibility is transferred to the EOF. The EOF Manager and ED will determine which facility will communicate the PARs to offsite agencies. Normally, initial PARs will be communicated to offsite agencies by the TSC while changes in PARs will be communicated to offsite agencies by the EOF.
14. Ensure that necessary support is provided to the SNC News writer, the SNC Spokesperson, and the Public Information Director to ensure timely and accurate information flow to the public. An unaffected EOF Manager will be available to assist the affected EOF Manager in Company Spokesperson interface activities.

B.2 EOF TECHNICAL SUPERVISOR

The duties and responsibilities of the EOF Technical Supervisor will be assumed by SNC corporate support personnel. The designated individual will be will be assigned according to a predetermined rotation schedule and will typically have plant specific long-term engineering/design experience. Reporting to the EOF Technical Supervisor are the emergency communicators and the necessary engineering technical, and licensing personnel needed to support tasks assigned to the EOF.

The duties and responsibilities of the EOF Technical Supervisor are as follows:

1. Provide technical interface to vendors, utility groups, consultants and technical investigation groups.
2. Assist in establishing a list of plant equipment/system modifications required to bring the plant to cold shutdown, recovery and/or startup.
3. Develop an engineering support plan compatible with the plant mitigation and recovery plan. Provide engineering support developing site recovery procedures. This plan will include engineering personnel resources.
4. Coordinate the work performed by SNC engineering, Southern Company Services, the architect engineer, the nuclear steam supply system supplier, and other engineering consultants. Coordinate the transmittal of engineering modification/design documents (Design Change Packages (DCP), Request for Engineering Assistance (REA), etc) to the site staff, and site and SNC procurement groups.
5. Coordinate the receipt and assessment of technical information related to plant systems and facility operations, and submit recommendations to the TSC Manager through the EOF Manager.
6. Provide licensing support, as requested, through utilization of the licensing support.
7. Provides communications support for offsite notifications (Emergency Notification Network(ENN), as requested.

B.3 EOF SUPPORT COORDINATOR

The duties and responsibilities of the EOF Support Coordinator will be assumed by SNC corporate support personnel. The individuals designated to assume the position will be indicated on a predetermined rotational schedule. Reporting to the EOF Support Coordinator are the non-technical personnel needed to support tasks assigned to the EOF. Additionally, the News writer is matrixed to the EOF Support Coordinator from the corporate communications organization.

The duties and responsibilities of the EOF Support Coordinator are as follows:

1. Provide assistance to the EOF Support Coordinator in the Technical Support Center (TSC) for ordering equipment and materials needed. Establish a standby list of personnel to provide additional technical support, as required.
2. Obtain materials, supplies, and equipment that are needed in the EOF.
3. Process expense accounts, distribute checks from payroll, and conduct other financial aspects of the emergency organization.
4. Provide logistics arrangements for support personnel called in to assist in the emergency, including communications hardware, transportation, food, and lodging.
5. Obtain assistance from corporate financial staff to communicate, as necessary, with banks, financial institutions, investors, joint owners and insurers regarding the emergency situation.
6. During the initial phase of the emergency, provide the official log of actions and the course of the emergency from the EOF.
7. Provide administrative services for the Corporate Emergency Response Organization, such as clerical, typing, and duplication.
8. Provide administrative, logistic, financial, and procurement support as appropriate during the recovery phase.

B.4 DOSE ASSESSMENT SUPERVISOR

The duties and responsibilities of the Dose Assessment Supervisor will be assumed by SNC corporate support personnel. The individuals designated to assume the position will be indicated on a predetermined rotation schedule. Reporting to the Dose Assessment Supervisor are the Dose Analyst, Field Team Coordinator, Field Team Communicator, and Radiological Status Communicator.

The TSC will initially be responsible for dose projection and field team control activities. When the EOF is activated and ready to assume functions of dose projection/assessment activities, then the EOF Dose Assessment Supervisor will coordinate transfer of dose assessment, field team control, and protective action determination from the TSC to the EOF. Coordination will include ED/EOF Manager mutual approval of the transfer with the intention of transferring dose assessment from the TSC to the EOF as rapidly as possible while ensuring a smoothly coordinated transfer of this critical function.

The duties and responsibilities of the Dose Assessment Supervisor are as follows:

1. Support the plant dose assessment supervisor as necessary. Be prepared to assume offsite dose projection if requested. Keep the EOF Manager informed of any offsite dose assessments performed by the site or corporate staff.
2. Provide an as low as reasonably achievable (ALARA) exposure review of engineering modifications and tasks proposed by the emergency organization, including necessary documentation of those reviews.
3. Develop methods for treatment and/or disposal of radioactive wastes resulting from the emergency and recovery operations.
4. Compare calculations and measurements with State and Federal groups performing radiological assessments.
5. Coordinate distribution of dose assessment information with offsite authorities.
6. Coordinate assistance to the State for transportation incidents involving radioactive material, as requested.
7. Develop protective action recommendations (PARs) and communicate to the EOF Manager the need for PAR communication once control is transferred to the EOF.

B.5 SECURITY COORDINATOR

The duties and responsibilities of the Security Coordinator will be assumed by SNC corporate security personnel. The individuals designated to assume the position will be indicated on a predetermined rotation schedule.

The duties and responsibilities of the Security Coordinator are as follows:

1. Support the plant security manager as necessary. Keep the EOF Manager informed of any security events/issues.
2. Provide assistance to the security supervisor at the site, as requested.
3. Establish and maintain access control for the EOF.

B.6 Offsite Response Coordinator

The duties and responsibilities of the Offsite Response Coordinator will be assumed by SNC Corporate Emergency Planning Coordinators and designated staff. The individuals designated to assume the position will be indicated on a predetermined rotation schedule.

The duties and responsibilities of the Offsite Response Coordinator are as follows:

1. Coordinate activities concerning the dispatch and update of technical liaisons to State and Local authorities, as appropriate.
2. Monitor EOF functional areas to facilitate coordination between the licensee and State and Local agencies.

B.7 ENGINEERING/TECHNICAL SUPPORT STAFF AND ADMINISTRATIVE SUPPORT STAFF

1. The Engineering/Technical Support staff and administrative support staff will report to the EOF, as directed. These job titles refer to a number of individuals performing a variety of designated tasks. Their numbers will depend on the type and duration of the emergency.
2. The Engineering/Technical Support staff are personnel designated by the management of the Corporate Emergency Organization. They provide management, technical, regulatory and licensing support during an emergency. This staff reports through the EOF Technical Supervisor to the EOF Manager.

3. The administrative support staff are the non-technical members of the Corporate Emergency Response Organization. They perform duties designated by the EOF Support Coordinator or appropriate manager which include but are not limited to the following:

   a. Providing clerical and secretarial support to the Emergency Organization.

   b. Operation of word processors.

   c. Operation of telecopiers.

   d. Making entries to and retrieving data from Nuclear Network.

   e. Retrieval of file documents.

   f. Updating status boards using information provided from the sites.

C. NOTIFICATION AND ACTIVATION

Initial notifications or emergency response personnel will follow the guidelines specified in the site specific Emergency Plan and Emergency Plan Implementing Procedures. This appendix contains the emergency notification of Corporate Management and the appropriate offsite support groups not specified in the site specific Emergency Plan(s).

C.1 NOTIFICATION OF CORPORATE MANAGEMENT

The On-call EOF Manager will be notified of all emergencies classified at any SNC site. The EOF Manager is responsible for activation of the EOF Staff and notifying the appropriate Corporate Management.

1. The EOF Manager is responsible for assuring that the Corporate Emergency Organization is notified
2. The EOF Manager will also be responsible for ensuring that the corporate emergency staff members report directly to the EOF.
3. Notification of personnel may be accomplished through the use of an automated or manual system.

C.2 NOTIFICATION OF OFFSITE SUPPORT AGENCIES

Offsite support agencies will be notified by the appropriate emergency organization member(s), as requested by VEGP, FNP, and HNP.

D. EMERGENCY FACILITIES AND EQUIPMENT

Following the declaration of an emergency, response activity will be coordinated at a number of facilities. These emergency response facilities are described in the site specific emergency plans. The EOF is a common facility for all SNC sites and is described in this section.

D.1 EOF DESCRIPTION

The EOF is the central location for management of the offsite emergency response, coordination of radiological assessment, and management of initial recovery operations. The EOF is located in Birmingham, Alabama and serves as the EOF for all SNC sites (VEGP, FNP, and HNP). The EOF will be activated as prescribed in the site specific Emergency Plan implementing procedures. From the EOF, SNC corporate management personnel assist the states and other governmental bodies by communicating protective action recommendations approved by the Emergency Director to ensure public health and safety. Plant systems information, radiological data, and meteorological data are provided via the SNC Integrated Data Display System to EOF personnel as needed to: assess environmental conditions, coordinate radiological monitoring activities, and recommend implementation of offsite emergency plans. Data displays provide periodic and timely conditions of the affected plant and periodic and timely assessment of radiological conditions in the plant environs.

The SNC integrated data display system utilizes data provided by the plant specific data links. These station data links are described in each site specific plan. These displays may be either manual or electronic. Data displays are located in the main caucus area of the EOF, dose assessment area, plant status area, and engineering area within the facility. Other displays may be located in the command center area. Data is also available to all state agencies responding to the EOF. Data is available both in the main caucus area and the area designated for the particular state agency. Similarly, this data is available to state and local authorities via a secure network dedicated to data distribution among the various offsite emergency response facilities. The data display system provides the user with a “master view” for the monitoring of multiple site events simultaneously. Data required to support EOF operations is provided by an extensive ring bus transport network. Data may also be obtained manually via telephone from the Control Room and the TSC to the EOF.

Contained within the facility will be the manpower and equipment necessary to provide dedicated direct communication links to the plant site(s). In addition, there are commercial and company wide phone systems to and from the site(s). A communication link will be established and maintained between the Emergency Operations Facility and the Technical Support Center (TSC) until the emergency director determines that the communication link is no longer needed. Other communications equipment accessible to the EOF includes Nuclear Network (an intra-industry computer-based information exchange network), telecopiers, and computer workstations designated for emergency use. Computer workstations are dedicated for performing dose assessment for multiple sites.

The EOF is the distribution center for all field data and sample analyses. This information will be available to county, State, and Federal representatives. The EOF is sized to accommodate 35 persons, including 25 pre-designated persons, 9 persons from the NRC, and 1 person from the Federal Emergency Management Agency (FEMA). Provisions have also been made for the relocation of NRC staff (including NRC communications capabilities) from the EOF to a near-site location, if requested. It is anticipated that representatives from the state(s) of Georgia, South Carolina, Alabama, and Florida will be dispatched to the EOF for an event at specific SNC site(s). The EOF has been designed to accommodate these representatives. Agreements exist between the appropriate State agencies and SNC to ensure rapid response of state personnel dispatched to the EOF. Table 4 provides additional information concerning EOF communications capabilities.

Upon activation of the EOF, Corporate personnel will provide staffing 24 hours per day until directed otherwise by the Emergency Director.

The emergency director, located at the affected site(s), is responsible for the management of the emergency response. Specific duties and responsibilities are provided in the site specific Emergency.

The EOF consists of several rooms, as shown, together with the location of key personnel, in Figure 2. The EOF is a dedicated facility. The designated emergency planning coordinator for each of the three sites maintains an office within the EOF to ensure readiness and daily operability.

Based on the physical location of the EOF, specialized ventilation systems are not required. The EOF ventilation system is consistent in design with

standard building codes. Similarly, EOF functions would not be interrupted by radiation releases from any SNC site.
Normal power to the EOF is from a reliable offsite source. Emergency lighting is provided by battery operated lights. Back-up power for the EOF is supplied by onsite diesel generation. All essential equipment is backed up by the diesel generation system.

The EOF is located adjacent to the document management section for SNC. The following records or information are available:

- Technical Specifications.
- Selected plant operating procedures.
- Emergency Plans.
- Emergency Plan Implementing Procedures.
- FSARs.
- State and local emergency response plans.
- Savannah River Site Emergency Plan.

The following records or information can be transmitted to the EOF manually, electronically or by facsimile:

- Environs radiological monitoring records.
- SNC employee radiation exposure histories.
- System piping and instrumentation diagrams and HVAC flow diagrams.
- Piping area diagrams.
- Electrical one-line, elementary, and wiring diagrams.

The above records or information are available in current form and updated as necessary to ensure currency and completeness.
Operations at this facility are directed by the EOF manager.

D.2 Contingency Planning

Optimum functionality and availability was considered in the decision to locate the EOF in Birmingham, Alabama. At this location, functionality of the EOF would be uninterrupted by radiation releases, natural phenomena, and security based events at any of the SNC sites. Support operations and coordination with Federal, State and local organizations would continue. If personnel were to be dispatched to the sites, then personal protection equipment would be available from

the local emergency management agency or from one of the unaffected SNC plant sites.

In the unlikely event that individuals should need to respond to the EOF from within the 10 mile EPZ of any SNC plant, they would be surveyed prior to release by local emergency authorities at the reception centers in accordance with State and Local emergency response plans.

In the unlikely event that the EOF becomes uninhabitable, resources and personnel will be transferred to the Corporate Headquarters of Alabama Power Company, located in Birmingham, Alabama. These actions will be taken as part of the normal business continuity plan.

E. COORDINATION WITH GOVERNMENTAL AGENCIES

The site specific Emergency Plan(s) delineate the governmental agencies to be notified and specifies the information to be initially conveyed. It is anticipated that representatives of various agencies will be dispatched to the EOF for an event at an SNC facility. Arrangements have been made between the appropriate State agencies and SNC to ensure rapid response of state personnel dispatched to the EOF.

E.1 U.S. NUCLEAR REGULATORY COMMISSION

Coordination with the U.S. Nuclear Regulatory Commission (NRC) may be underway at several locations simultaneously. For details of the NRC response, see the NRC Incident Response Plan NUREG 0728.

Initial notification of the NRC will proceed as specified in the site specific Emergency Plan. The resident NRC inspector(s) and plant personnel have direct communications from the site control room to the NRC headquarters in Rockville, Maryland. and to the regional headquarters in Atlanta, Georgia.

The resident inspector(s) may be reinforced by additional NRC personnel shortly after notification of an emergency. The Emergency Director is responsible for coordinating NRC activities to reduce duplication of effort and reduce impact on the plant staff during the emergency situation.

Provisions have been made to have direct NRC FTS lines in the TSC and the EOF during an emergency. This will allow personnel in the control room to continue responding to the emergency while personnel in the TSC or EOF respond to questions and input from the NRC.

NRC activities requiring response from the licensee will be coordinated by the EOF Technical Coordinator through the EOF manager.

E.2 STATE GOVERNMENTAL AGENCIES

The government notifications are outlined in the site specific Emergency Plan(s). Coordination of offsite responses to the emergency is the responsibility of State agencies as outlined in the State Radiological Emergency Response Plans.

E.3 LOCAL GOVERNMENTAL AGENCIES

Notification of local government officials is outlined in the site specific Emergency Plan(s). Coordination with local government agencies will normally be through the responsible State agency.

E.4 DEPARTMENT OF ENERGY

Notification of DOE officials is outlined in the site specific Emergency Plan.

F. OFFSITE SUPPORT

Offsite resources that may be available to support an emergency response effort include, but are not limited to, the following:

1. Southern Nuclear Operating Company
2. Georgia Power Company
3. Alabama Power Company
4. Southern Company Services, Inc.
5. The architect engineers
6. NSSS supplier
7. Nuclear industry
8. Contract laboratories

F.1 SOUTHERN NUCLEAR OPERATING COMPANY (SNC)

1. SNC is divided into three projects: the Farley Project, the Hatch Project, and the Vogtle Project. Each of the projects is further divided into a plant staff and a corporate staff. These represent a pool of positions of which approximately two-thirds would be additional assets that could be made available to support an individual site emergency organization, as required.
   a. Plant Staffs - The permanent plant staffs consist of personnel who possess expertise in at least one of the following areas: operations,

maintenance, engineering, administration, or technical support. These personnel would be available to assist in an emergency or recovery situation at an SNC nuclear facility.

b. Corporate Staffs - These staffs consist of personnel who provide management, technical, clerical, procurement, and regulatory support to the nuclear facilities.

F.2 GEORGIA POWER COMPANY (GPC)

1. The GPC Fossil and Hydro Power Generation Department is responsible for the operations and maintenance of all GPC non-nuclear generating facilities including diesel and combustion turbine facilities. This represents a large source of technical expertise which could provide support to the emergency organization, if required.
2. The GPC Power Delivery Department manages the activities of the divisions and areas of the company which provide the electrical services to customers. This organization has a large resource of people and heavy equipment which may be of assistance following a nuclear emergency.
3. Other GPC assets, including maintenance and repair facilities, training facilities, engineering staffs, and headquarters personnel represent additional resources available for emergency support.
4. The GPC Central Laboratory has personnel and facilities available to provide offsite monitoring, sample analysis, and dosimetry processing for the affected site.

F.3 ALABAMA POWER COMPANY (APCO)

1. The APCO Fossil and Hydro Power Generation Department is responsible for the operations and maintenance of all APCO non-nuclear generating facilities including diesel and combustion turbine facilities. This represents a large source of technical expertise which could provide support to the emergency organization, if required.
2. The APCO Power Delivery Department manages the activities of the divisions and areas of the company which provide the electrical services to customers. This organization has a large resource of people and heavy equipment which may be of assistance following a nuclear emergency.
3. Other APCO assets, including maintenance and repair facilities, training facilities, engineering staffs,

and headquarters personnel represent additional resources available for emergency support.

F.4 SOUTHERN COMPANY SERVICES, INC. (SCS)

1. SNC has the primary responsibility for engineering support of VEGP, FNP and HNP. SCS may be utilized in response to a plant emergency or for subsequent recovery operations as deemed necessary by SNC.

F.5 ARCHITECT ENGINEERS

The architect engineers will provide support as requested through the engineering services manager. The architect engineers are SNC and Bechtel Power Corporation.

1. SNC serves as its own Architect/Engineer. SCS, an associate company to Southern Nuclear Operating Company, will be used to the extent appropriate in responding to nuclear emergencies.

2. Bechtel Power Corporation, headquartered in Gaithersburg, Maryland, also performs architect engineer services for SNC. Bechtel's technical staffs are engaged in all phases of public utility engineering, design, construction, purchasing, inspection, and expedition of materials, as well as consultation on utility operating matters. Bechtel has available a broad range of engineering, construction, and consulting experience. Bechtel's nuclear experience includes engineering studies, the evaluation of reactor systems, safety evaluations, detailed engineering design, construction, and startup and testing of nuclear power facilities.

F.6 NUCLEAR STEAM SUPPLY SYSTEM VENDOR

The applicable NSSS vendor will provide support through the engineering services manager. Plant specific references to the appropriate vendor are specified in the plant specific base plans. The NSSS maintains a large staff of technically qualified people in all the engineering disciplines related to the design, construction, and operation of a nuclear power plant. These same skills would be necessary in the evaluation of, and recovery from, an emergency at any SNC site. Assistance would most likely be sought for large-scale core analysis, special tool design, and licensing.

F.7 NUCLEAR INDUSTRY

The nuclear industry provides a large reservoir of personnel with a wide range of technical expertise and knowledge. A nuclear industry national inventory of personnel who might be called upon to supplement Company personnel has been developed through the Institute of Nuclear Power Operations (INPO).

In addition, a number of utilities have entered into an INPO coordinated Voluntary Assistance Agreement program. This provides a mechanism to draw upon industry resources during an emergency.

Support may be called upon from neighboring utilities would include the following:

1. Manpower and equipment to assist in in-plant and emergency field monitoring.
2. Engineering, design, and technical expertise to assist in determining the cause of the accident and to support recovery.
3. Manpower and equipment to assist in maintenance and repairs to the facility.

F.8 CONTRACT LABORATORIES

Corporate Health Physics maintains contracts with analytical services laboratories and will coordinate requests for analytical services with the appropriate vendor.

G. MAINTAINING EMERGENCY PREPAREDNESS

G.1 ORGANIZATIONAL PREPAREDNESS

1. Training

Corporate personnel identified in the Emergency Response Organization receive training. The training consists of familiarization with the Site Emergency Plans and applicable emergency implementing procedures required to carry out their specific functions.

The corporate emergency planning coordinator(s) will ensure that personnel in the Corporate Emergency Response Organization are familiar with the Emergency Plans and able to respond promptly. A training matrix for corporate personnel assigned to the ERO is shown in Table 2, and training course summaries are presented in Table 3. Training will be documented in accordance with established practices.

The corporate emergency planning coordinator(s) are responsible for assuring that training is conducted for corporate emergency response personnel each calendar year.

2. Drills/Exercises

Drills/ exercises will be conducted each calendar year to test the performance of implementing procedures, personnel, and emergency equipment. These drills/exercises will be conducted with each SNC site.

SNC's goal is to activate the EOF in support of all site activities that involve TSC activation. EOF activation is required at least 3 times annually (1 scenario per site per year) in accordance with the existing Emergency Plans. At least 1 activation every 5 years will require a concurrent EOF support response for more than one SNC site.

Each drill/exercise will test, as a minimum, the communication links and notification procedures to assure the prompt notification of the corporate staff.

Provisions are made for critique of all drills/exercises. Critique items will be forwarded to the site emergency preparedness supervisor for processing in the site specific corrective action program.

G.2 REVIEW AND UPDATE OF PLAN AND PROCEDURES

Reviews of the site Emergency Plan and Emergency Plan Implementing Procedures will be performed in accordance with site specific emergency plans. These reviews will be utilized to update the Plans and procedures and to improve emergency preparedness.

TABLE 1

TYPICAL CORPORATE EMERGENCY ORGANIZATION ASSIGNMENTS

EMERGENCY POSITION	ASSIGNMENT
EOF Manager	• Supervision from corporate staff as designated in NMP-EP-001
EOF Technical Supervisor	• Corporate staff as designated in NMP-EP-001
EOF Support Coordinator	• Corporate staff as designated in NMP-EP-001
EOF Dose Assessment Supervisor	• Corporate staff as designated in NMP-EP-001
Dose Analyst	• Corporate staff as designated in NMP-EP-001
Field Team Coordinator	• Corporate staff as designated in NMP-EP-001
Field Team Communicator	• Corporate staff as designated in NMP-EP-001
Radiological Status Communicator	• Corporate staff as designated in NMP-EP-001
Plant Status Loop Communicator	• Corporate staff as designated in NMP-EP-001
ENN Communicator	• Corporate staff as designated in NMP-EP-001
ENS Communicator	• Corporate staff as designated in NMP-EP-001
Licensing Support Coordinator	• Corporate staff as designated in NMP-EP-001
Security Coordinator	• Corporate staff as designated in NMP-EP-001
Offsite Response Coordinator	• Corporate staff as designated in NMP-EP-001
Engineering/Technical Support Staff	• Corporate staff as designated in NMP-EP-001
Administrative Support Staff	• Corporate staff as designated in NMP-EP-001
Liaisons	• Corporate staff as designated in NMP-EP-001
Public Information Director	• Corporate staff as designated in NMP-EP-001
Company Spokesperson	• Corporate staff as designated in NMP-EP-001
News writer	• Corporate staff as designated in NMP-EP-001
Other Public Information Emergency Communications Organization Staff	• Corporate staff as designated in NMP-EP-001

TABLE 2
CORPORATE EMERGENCY ORGANIZATION TRAINING MATRIX

Position	Subject Area		
	Emergency Plan Overview	Position Specific Items	Offsite Dose Assessment
EOF Manager	X	X	
EOF Technical Supervisor	X	X	
EOF Support Coordinator	X	X	
EOF Dose Assessment Supervisor	X	X	X
Dose Analyst	X	X	X
Field Team Coordinator	X	X	X
Field Team Communicator	X	X	
Radiological Status Communicator	X	X	
Plant Status Loop Communicator	X	X	
ENN Communicator	X	X	
ENS Communicator	X	X	
Licensing Support Coordinator	X	X	
Security Coordinator	X	X	
Offsite Response Coordinator	X	X	
Engineering/Technical Support Staff	X	X	
Administrative Support Staff	X	X	
Liaisons	X	X	
Public Information Director	X	X	
Company Spokesperson	X	X	
News writer	X	X	
Other Public Information Emergency Communications Organization Staff	X	X	

TABLE 3

DESCRIPTION OF TRAINING SUBJECT AREAS

Subject Area	Description
Emergency Plan Overview	An overview of the Emergency Plan with special attention to emergency planning zones (EPZs); emergency classification system; emergency response organizations; responsibilities of emergency response personnel; site accountability; and site dismissal.
Offsite Dose Assessment	Dose projection methodology including manual and computerized methods; methods for obtaining meteorological and radiological data; operation of the dose assessment computer; and interpretation of offsite dose calculation results.
Position Specific Items	An overview of this appendix with an emphasis on organization, interactions with other elements of the emergency organization, and position specific responsibilities as delineated in the emergency implementing procedures. This overview training may be conducted as part of classroom, table-top, drill, or exercise.

TABLE 4

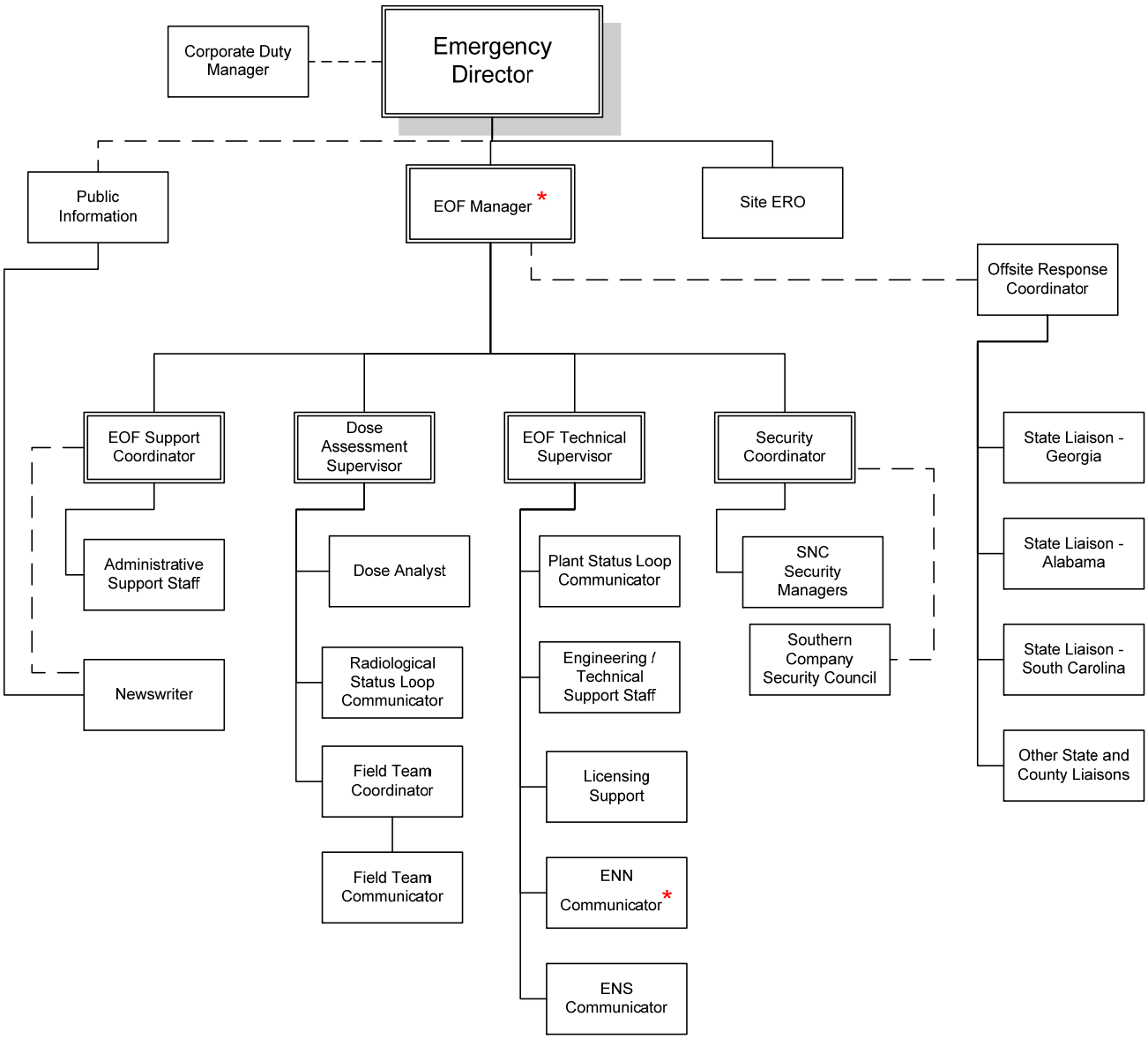
TYPICAL EOF COMMUNICATION CAPABILITY

Communications Functions	VEGP	HNP	FNP
EOF Management with TSC	Commercial Telephone lines TSC/EOF/OSC Conference Bridge Radio	Commercial Telephone lines TSC/EOF/OSC Conference Bridge Radio	Commercial Telephone lines TSC/EOF/OSC Conference Bridge Radio
Resource Management	Commercial Telephone lines OPX Public Address System	Commercial Telephone lines OPX Public Address System Ringdown	Commercial Telephone lines OPX Public Address System
Radiological Monitoring	Southern LINC Kenwood Radio System	Southern LINC Kenwood Radio System	Southern LINC Kenwood Radio System
Off-site (PARs)	ENN	ENN	ENN
NRC Use	ENS HPN RSCL PMCL MCL LAN Conference Phones (3)		

Notes:

1. The Offsite Premises Extension (OPX) lines to the three SNC plant sites bypass the local phone switch. These lines may be referenced as company tie lines.
2. Intra-facility public address and intra-building public address systems are also available.

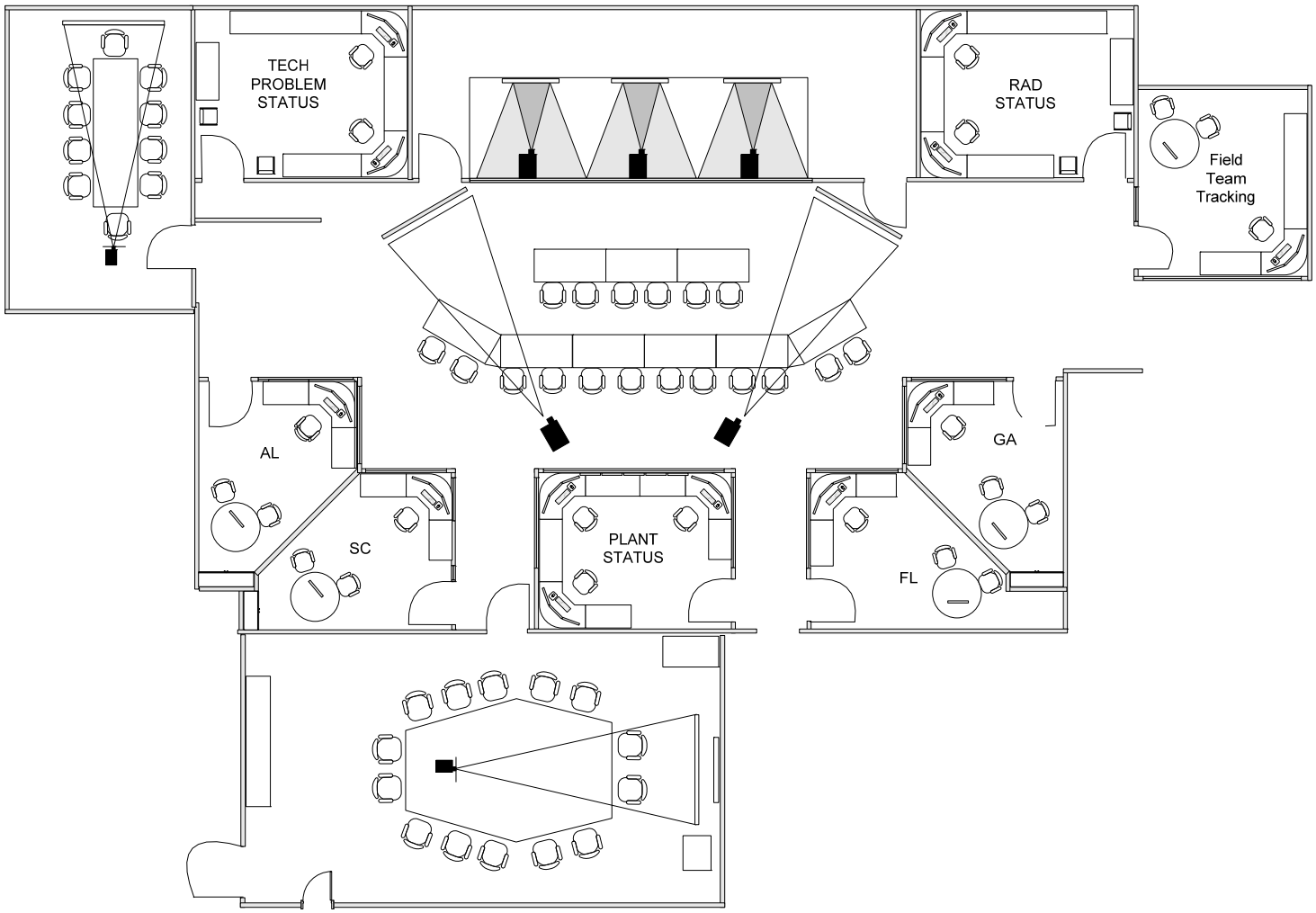
Figure 1



* Positions used to meet augmentation requirements for EOF direction and notification/communication.

FIGURE 2

EOF LAYOUT



NUREG 0654 Rev.1 Ref. Section	FNP EP Ref. Section
A.1.a	Part I, Sec.II.C, App. 7(G)
A.1.b	Part I, Sec.II.A
	Part I, Sec.II.B
A.1.c	Part I, Fig. 12
	Part I, Fig. 13
A.1.d	Part I, Sec.II.A
	Part I, Sec.II.B
A.1.e	Part I, Sec.II.A
A.2.a	N/A
A.2.b	N/A
A.3	Part I, App. B
A.4	Part I, Sec.II.A.1, App. 7(G)
	Part I, Sec.II.B.2.a
	Part I, Sec.V.B.1
B.I	Part I, Sec.II.A
B.2	Part I, Sec.II.A.1
	Part I, Sec.V.A
B.3	Part I, Sec.II.A.1
B.4	Part I, Sec.II.A.1
B.5	Part I, Sec.II.A
	Part I, Sec.II.B, App. 7(G)
	Part I, Sec.V.B
B.6	Part I, Sec.II.A, App. 7(G)
	Part I, Sec.II.B, App. 7(G)
	Part I, Fig. 12
	Part I, Fig. 13
B.7	Part I, Sec.II.B, App. 7(G)
B.7.a	Part I, Sec.II.B.1, App. 7(G)
	Part I, Sec.II.B.2
B.7.b	Part I, Sec.II.B.3, App. 7(G)
B.7.c	Part I, Sec.II.B.2, App. 7(G)
B.7.d	Part I, Sec.II.B.2
B.8	Part I, Sec.II.C.2, App. 7(G)
B.9	Part I, Sec.II.C.2
B.5	Part I, Sec.III.D.3
	Part I, Sec.III.D.4
	Part I, App.B
C.1.a	Part I, Sec.II.C.1.a
C.1.b	Part I, Sec.II.C, App. 7(G)
C.1.c	Part I, Sec.III.A
C.2.a	N/A
C.2.b	Part I, Sec.II.C.1, App. 7(G)
C.3	Part I, Sec.II.C.2, App. 7(G)
C.4	Part I, Sec.III.C.2, App. 7(G)
D.1	Part I, Sec.IV.A
D.2	Part I, Sec.IV.A
D.3	N/A
D.4	N/A

NUREG 0654 Rev.1 Ref. Section	FNP EP Ref. Section
E.1	Part I, Sec.VI.A
E.2	Part I, Sec.V, App. 7(G)
E.3	Part I, Sec.VI.B.1
E.4	Part I, Sec.VI.A
E.4.a	Part I, Sec.VI.A
E.4.b	Part I, Sec.VI.A
E.4.c	Part I, Sec.VI.A
E.4.d	Part I, Sec.VI.A
E.4.e	Part I, Sec.VI.A
E.4.f	Part I, Sec.VI.A
E.4.g	Part I, Sec.VI.A
E.4.h	Part I, Sec.VI.A
E.4.i	Part I, Sec.VI.A
E.4.j	Part I, Sec.VI.A
E.4.k	Part I, Sec.VI.A
E.4.l	Part I, Sec.VI.A
E.4.m	Part I, Sec.VI.A
E.4.n	Part I, Sec.VI.A
E.5	N/A
E.6	Part I, Sec.VI.B.1
E.7	Part I, Sec.VI.B.1, App. 10(J)
F.1.a	Part I, Sec.III.B.11, App. 7(G)
F.1.b	Part I, Sec.III.B, App. 7(G)
F.1.c	Part I, Sec.III.B, App. 7(G)
F.1.d	Part I, Sec.III.B, App. 7(G)
F.1.e	Part I, Sec.V, App. 7(G)
	Part I, Sec.VI
F.1.f	Part I, Sec.III.B.9, App. 7(G)
	Part I, Sec.III.B.10
F.2	Part I, Sec.III.B
	Part I, Sec.III.D.3
F.3	Part I, Sec.VIII.C.4
G.1	Part I, Sec.VI.B.2, App.10(J)
G.2	Part I, Sec.VI.B.2, App. 10(J)
G.3.a	Part I, Sec.II.B.2, App. 10(J)
	Part I, Sec.III.A.5
G.3.b	Part I, Sec.III.A.5, App. 10(J)
G.4.a	Part I, Sec.II.B.2.a, App. 10(J)
G.4.b	Part I, Sec.VI.B.3, App. 10(J)
G.4.c	Part I, Sec.VI.B.3, App. 10(J)
G.5	Part I, Sec.VI.B.2.b, App. 10(J)
H.1	Part I, Sec.III.A.1
	Part I, Sec.III.A.4
H.2	Part I, Sec.III.A.2, App. 7(G)
	Part I, Sec.III.A.3
H.3	N/A
H.4	Part I, Sec.IV, App. 7(G)
H.5	Part I, Sec.IV
H.5.a	Part I, Sec.III.c.1.a

NUREG 0654 Rev.1 Ref. Section	FNP EP Ref. Section
H.5.b	Part I, Sec.III.C.1.b
H.5.c	Part I, Sec.IV
H.5.d	Part I, Sec.III.C.1.d
H.6.a	Part I, Sec.III.C1.a
H.6.b	Part I, Sec.III.C.2
	Part I, Sec.III.C.3
H.6.c	Part I, Sec.III.C.2
H.7	Part I, Sec.III.C.2
H.8	Part I, Sec.III.C.1.a, App.7(G)
H.9	Part I, Sec.III.A.4
	Part I, Sec.III.D.1
H.10	Part I, Sec.VIII.C
H.11	Part I, App.A
H.12	Part I, Sec.III.A.2, App.7(G)
I.1	Part I, Sec.IV
I.2	Part I, Sec.III.C.1.b
	Part I, Sec.III.C.1.c
	Part I, Sec.IV.B
I.3.a	Part I, Sec.III.C.1.b
I.3.b	Part I, Sec.III.C.2
I.4	Part I, Sec.III.C.2
I.5	Part I, Sec.III.C.2, App. 7(G)
I.6	Part I, Sec.III.C.2
I.7	Part I, Sec.III.C.2
I.8	Part I, Sec.II.A.9
	Part I, Sec.IV.B.5.a
	Part I, Sec.V.B.1
I.9	Part I, Sec.III.C.2
I.10	Part I, Sec.IV.B.4
	Part I, Sec.IV.B.5
I.11	N/A
J.1.a	Part I, Sec.IV.C.1
J.1.b	Part I, Sec.IV.C.1
J.1.c	Part I, Sec.IV.C.1
J.1.d	Part I, Sec.IV.C.1
J.2	Part I, Sec.IV.C.1
J.3	Part I, Sec.IV.C.1
J.4	Part I, Sec.IV.C.1
J.5	Part I, Sec.IV.C.1
J.6.a	Part I, Sec.IV.C.1
J.6.b	Part I, Sec.IV.C.1
J.6.c	Part I, Sec.IV.C.1.c
J.7	Part I, Sec.IV.C.2
J.8	Part I, App. E
J.9	N/A
J.10.a	Figure 17
	Figure 19
	Figure 20
	Figure 21
J.10.b	Part I, Sec.IV.C.2
J.10.c	Part I, Sec.VI.B.1
J.10.d	NA
J.10.e	N/A
J.10.f	N/A
J.10.g	N/A
J.10.h	N/A
J.10.i	N/A
J.10.j	N/A
J.10.k	N/A
J.10.l	N/A
J.10.m	Part I, Sec.IV.C.2
J.11	N/A
J.12	N/A
K.1.a	Part I, Sec.IV.C.1.c
K.1.b	Part I, Sec.IV.C.1.c
K.1.c	Part I, Sec.IV.C.1.c
K.1.d	Part I, Sec.IV.C.1.c
K.1.e	Part I, Sec.IV.C.1.c
K.1.f	Part I, Sec.IV.C.1.c
K.1.g	Part I, Sec.IV.C.1.c
K.2	Part I, Sec.IV.C.1.c
K.3.a	Part I, Sec.III.C.3
	Part I, Sec.IV.C.1.c
K.3.b	Part I, Sec.III.C.3
K.4	N/A
K.5.a	Part I, Sec.IV.C.1.c
K.5.b	Part I, Sec.III.D.2
	Part I, Sec.IV.C.1.c
K.6.a	Part I, Sec.IV.C.1.c
K.6.b	Part I, Sec.IV.C.1.c
K.6.c	Part I, Sec.IV.C.1.c
	Part I, Sec.IV.A.4
K.7	Part I, Sec.IV.C.1.c
L.1	Part II, Sec.II.B
	Part II, Sec.II.C
	Part II, Sec.II.D
L.2	Part I, Sec.III.D.2
L.3	N/A
L.4	Part I, Sec.III.D.3
M.1	Part I, Sec.V11
M.2	Part I, Sec.II.B.3
M.3	Part I, Sec.VII
M.4	Part I, Sec.IV.B.4
N.1.a	Part I, Sec.VIII.A.1
N.1.b	Part I, Sec.VIII.A.1
N.2.a	Part I, Sec.VIII.C
N.2.b	Part I, Sec.VIII.A.2.a
N.2.c	Part I, Sec.VIII.A.2.b
N.2.d	Part I, Sec.VIII.A.2.c
N.2.e(1)	Part I, Sec.VIII.A.2.d
N.2.e(2)	Part I, Sec.VIII.A.2.d
N.3.a	Part I, Sec.VIII.A
N.3.b	Part I, Sec.VIII.A
N.3.c	Part I, Sec.VIII.A
N.3.d	Part I, Sec.VIII.A

NUREG 0654 Rev.1 Ref. Section	FNP EP Ref. Section
N.3.e	Part I, Sec.VIII.A
N.3.f	Part I, Sec.VIII.A.1.c
	Part I, Sec.VIII.A.1.d
	Part I, Sec.VIII.A.2.e
N.4	Part I, Sec.VIII.A.1.e
N.5	Part I, Sec.VIII.A.1.e
O.1	Part I, Sec.VIII.B, App. 7(G)
O.1.a	Part I, Sec.VIII.B.3
O.1.b	N/A
O.2	Part I, Sec.VIII.A
	Part I, Sec.VIII.A.2
O.3	Part I, Sec.VIII.B.1.c
O.4.a	Part I, Sec.VIII.B.1.a, App. 7(G)
	Part I, Sec.VIII.B.2.a
O.4.b	Part I, Sec.VIII.B.I.a
	Part I, Sec.VIII.B.2.a
O.4.c	Part I, Sec.VIII.B.1.b, App. 7(G)
O.4.d	Part I, Sec.VIII.B.1.d
	Part I, Sec.VIII.B.1.f
O.4.e	Part I, Sec.VIII.B.1.e
O.4.f	Part I, Sec.VIII.B.1.c
O.4.g	Part I, Sec.VIII.B.3
O.4.h	Part II, Sec.VI.C
	Part II, Sec.VI.D
O.4.i	Part I, Sec.VIII.B.2, App. 7(G)
O.4.j	Part I, Sec.VIII.B.1.g, App. 7(G)
O.5	Part I, Sec.VIII.B, App. 7(G)
P.1	Part I, Sec.VIII.B.4
P.2	Part I, Sec.I.B, App. 9(I)
P.3	Part I, Sec.I.B, App. 9(I)
P.4	Part I, Sec.VIII.D, App. 9(I)
P.5	Part I, Sec.VIII.D, App 9(I)
P.6	Part I, App. F
P.7	Part I, App. D
P.8	Part I, Table of Contents
P.9	Part I, Sec. VIII.D, App 9(I)
P.10	Part I, Sec.VIII.C.4

NUREG 0654 Rev.1 Ref. Section	FNP EP Ref. Section

APPENDIX 9(I)

RESPONSIBILITY FOR THE PLANNING EFFORT

Responsibility for the Planning Effort

The Executive Vice President/Chief Nuclear Officer (CNO)Southern Nuclear Operating Company(SNC)has overall responsibility and authority for all nuclear activities, including the emergency planning (EP) programs. Reporting to the Executive Vice President is the Vice President Fleet Operation Support and the Vice President - Nuclear Plant Site.

The SNC Emergency Planning program is comprised of two distinct and integral functions; emergency planning and emergency preparedness. Responsibility for the performance of these functions is assigned to various members of the SNC Organization and coordinated as follows.

Emergency Planning:

The Vice President Regulatory Affairs has Fleet responsibility for emergency planning. The Fleet Emergency Preparedness Manager has overview management responsibility for the Fleet SNC Emergency Planning program effort.

The Fleet Emergency Preparedness Manager is responsible for overseeing emergency planning activities offsite and coordinating those activities with Licensee, Federal, State and local response organizations. The Emergency Planning Coordinator(s) reports to the Fleet Emergency Preparedness Manager in support of this effort.

The Emergency Plans are maintained by the Fleet Security and Emergency Preparedness Manager. The Fleet Emergency Preparedness Manager provides strategic direction for SNC emergency planning and coordinates with site management through the Vice President – Fleet Operations Support.

The Emergency Planning Coordinator(s) coordinate site input and involvement in emergency planning programs with the Emergency Preparedness Supervisor. The Emergency Planning Coordinator(s) review Emergency Plan changes to determine if the effectiveness of the specific plans have been reduced. Emergency Plan changes which are judged to reduce the effectiveness of the Plan will be submitted to the NRC for approval prior to implementation.

Emergency Preparedness:

The Vice President – (Nuclear Plant Site) is responsible for the site Emergency Preparedness aspects of the program. The Emergency Preparedness Supervisor is responsible for coordinating emergency preparedness activities onsite and supports offsite emergency preparedness activities in the vicinity of the plant. The Emergency Preparedness Supervisor reports through the Regulatory Affairs Manager to the Vice President – (Nuclear Plant Site).

The Emergency Planning Supervisor is responsible to the Regulatory Affairs Manager for implementation of emergency planning strategies.

Coordination:

The Fleet Emergency Preparedness Manager coordinates site input and involvement in emergency planning programs with the Emergency Preparedness Supervisor. The Emergency Preparedness Supervisor is responsible for the implementation of the Emergency Plan and procedure development and maintenance. Figure 1 shows the EP Organization. The Fleet Emergency Preparedness Manager, Emergency Planning Coordinator, Emergency Preparedness Supervisor, and other individuals with emergency planning responsibilities are trained by self-study and by attending industry seminars, short courses, workshops, etc.

Onsite Emergency Plan Implementing Procedures (EIPs) are maintained by the Regulatory Affairs Manager with the Emergency Preparedness Supervisor being the principal site contact. EIPs for the corporate emergency response organization and procedures governing fleet emergency planning activities are maintained by the Fleet Emergency Preparedness Manager. The Fleet Emergency Preparedness Manager or designee performs a review of the site specific emergency plan annually and all onsite EIPs biennially. The review includes the letters of agreement, which are updated as necessary.

The Fleet Emergency Preparedness Manager performs a review of the emergency plans for Southern Nuclear once each calendar year. The review includes a comparison for consistency of all emergency plans for the specific sites including the Security Plan, State, County, and the Savannah River Site plan, as appropriate.

The Emergency plans and EIPs are revised in accordance with applicable site procedures.

Emergency Plan changes which are judged to reduce the effectiveness of the Plan will be submitted to the NRC for approval prior to implementation. The Emergency Planning Coordinator will review Emergency Plan changes to determine if the effectiveness of the site specific plan has been reduced prior to submitting the proposed change for departmental review and subsequently to the PRB for approval.

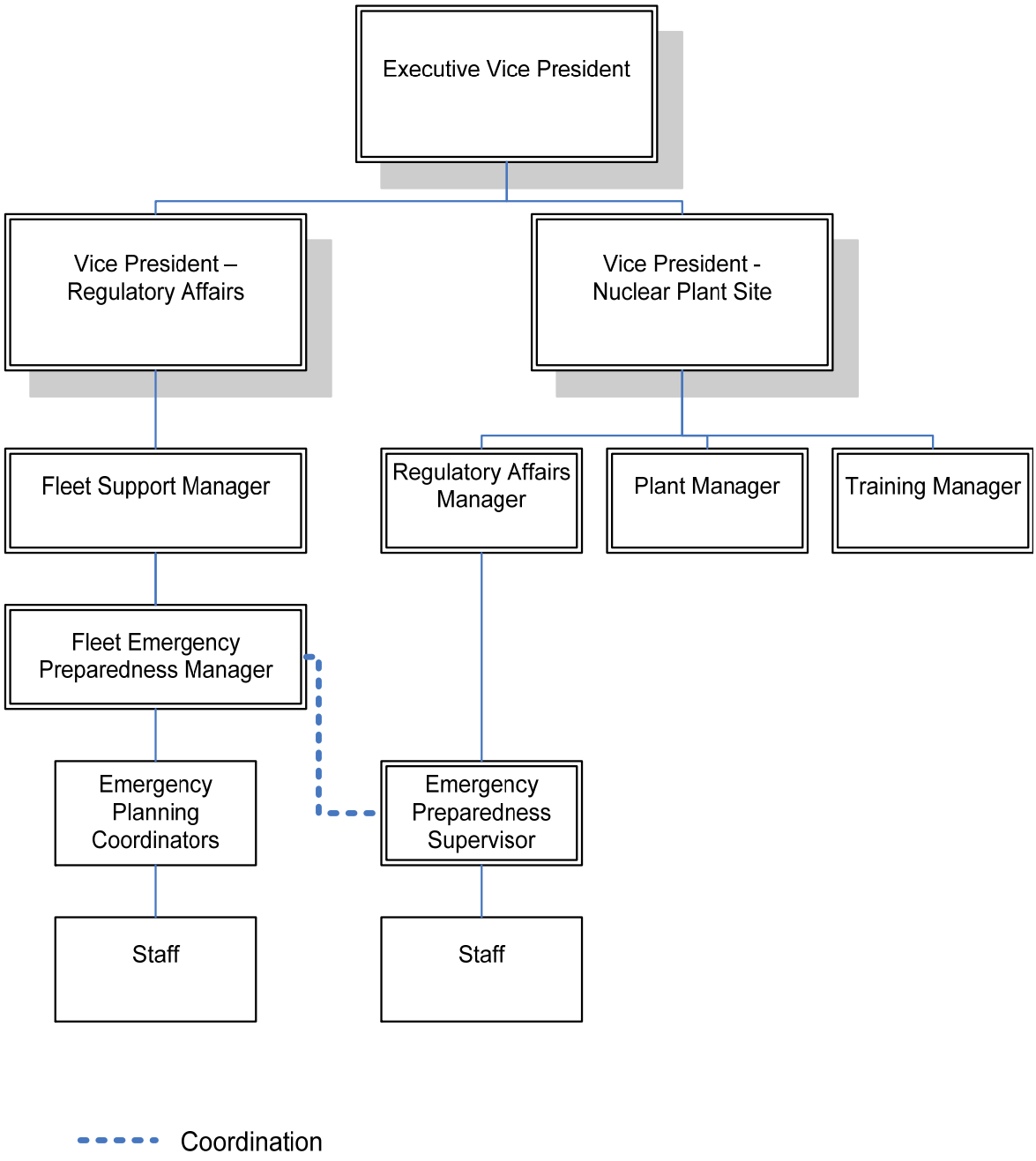
As required by 10CFR50.54(t). An annual independent audit of the emergency preparedness program is conducted by the SNC Nuclear Oversight Department. This audit is conducted as part of the standard audit program and will include a review of the Emergency Plan, its implementing procedures and practices, emergency preparedness training, annual exercises, equipment, and emergency response facilities. In addition, an audit of the interfaces with offsite agencies is performed by the SNC Nuclear Oversight department.

Each audit is nominally conducted every 12 months.

Audits are performed in accordance with SNC Nuclear Oversight department procedures. Audit reports are written and distributed to management and, in addition, applicable portions of the corporate audit reports are made available to affected Federal, State, and local agencies, as appropriate, in accordance with 10CFR50.54(t).

Appropriate departments are responsible for implementing corrective actions resulting from the audit findings. Records of these audits and exercise findings are maintained in accordance with plant procedures.

In addition to this Plan, several other formal emergency plans have been developed to support the overall emergency response effort. These supporting plans and their sources are listed in procedure NMP-EP-300, SNC Corporate Emergency Preparedness, Conduct of Operations.



Emergency Preparedness Organization
Figure I

APPENDIX 10(J)

EMERGENCY COMMUNICATIONS PLAN

EMERGENCY COMMUNICATIONS PLAN
TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1.0 PURPOSE

The Southern Nuclear Emergency Communications Plan (ECP) is a portion of the Farley Nuclear Plant (FNP) site Emergency Plan submitted to the Nuclear Regulatory Commission (NRC). The SNC-ECP is reviewed and updated annually in conjunction with review and update of the site Emergency Plans.

The Vice President and General Counsel, SNC Corporate Council and Compliance, is responsible for coordination and administration of the Emergency Communications Plan (ECP or the Plan). The Plan will be reviewed and updated annually.

The ECP is designed to:

A. Coordinate the public communications effort through the issuance of timely, accurate information during an emergency and maintain an orderly flow of information during the recovery period.

B. Describe the means to activate and staff emergency communications positions in the Alabama Power/Georgia Power (APC/GPC) Corporate Media Center (CMC) in Birmingham/Atlanta, the Joint Information Center (JIC), and the SNC Emergency Operations Facility (EOF).

C. Describe the process of information dissemination through news releases and press briefings.

D. Describe the training of personnel in their functions and testing of the response to be made pursuant to the ECP.

E. Maintain an orderly flow of information during the recovery period.

F. Describe the Public Education and Information Program for the periodic dissemination of emergency planning instructional materials to residents and transients in the plume exposure pathway Emergency Planning Zone.

G. Provide for 24-hour/day Emergency Communications Organization (ECO) staff coverage in the event of an emergency.

H. Describe the training and testing of personnel in their functions under the Plan.

I. Assign responsibilities to and duty locations for the Emergency Communications response team.

2.0 POLICY

The public information policy described below provides guidance for use during an emergency at a SNC nuclear plant (the Plant).

A. The Southern Company has a policy of full disclosure and will maintain honest and open communications with public officials, the public (especially in the immediate vicinity of the plant), and its employees at all times. This attitude stems from resolve to operate all facilities safely and prudently and to communicate clearly and completely any significant breach of safety.

B. The company will provide the public with prompt and accurate information through established news and information channels.

C. The company will make every effort to meet the information needs of the public and employees while communicating promptly with appropriate local, state, and federal officials during the period of the emergency.

D. Statements to the news media and the public concerning the Plant and its operation during any emergencies are to be made only with the knowledge and guidance of the appropriate GPC/APC Public Relations/Corporate Communication Departments and appropriate Southern Nuclear management.

3.0 RELATIONSHIP WITH OTHER AGENCIES

A. The Emergency Communications Organization (ECO) is responsible for the coordination and issuance of all news announcements related to emergency conditions at the Plant. Federal, state and county emergency management agencies are responsible for the issuance of public announcements relating to off-site conditions, including recommended protective actions.

B. A Joint Information Center (JIC) will be operated where the Utility, the state(s), the federal agencies (including the SRS as appropriate), and counties will coordinate information, issue news releases, make announcements, and may participate jointly in news briefings. Public response activities will be conducted and coordinated jointly with state and county agencies as appropriate. prior to JIC activation the Corporate Media Center (CMC) at APC/GPC Corporate Headquarters may coordinate these functions.

C. Work areas for public information officers of the federal, state, and county emergency response agencies are available at the JIC. Telecommunications facilities are also available to these agencies.

D. Utility news announcements will be provided to representatives of government agencies prior to their distribution to the news media or the public.

E. The county and state emergency management agencies should advise the Utility of announcements for the news media or the Emergency Alert Stations (EAS) prior to their distribution to the news media.

F. Public response may include state agency representatives and utility employees coordinated by the CMC/JIC Public Response Coordinator. Rumors related to off-site matters will be referred to the appropriate federal, state, or county agency representatives for proper response. Rumors related to on-site matters which agencies are aware of should be relayed to the CMC/JIC Public Response Coordinator for the necessary actions.

4.0 FLOW OF EMERGENCY PUBLIC INFORMATION

Information release for a Notification of Unusual Event is managed by the SNC Corporate Communication Manager in coordination with Southern Nuclear management and APC/GPC Corporate Communication.

At an Alert classification or higher, approval of news releases, other than the Initial News Release (INR), is required from both the EOF Manager and the Public Information Director (PID) or their designee(s).

The following figures are designed to show the flow of information for emergencies classified as Alert or higher.

A. Flow of Public Information During an Emergency

B. Initial/Early Stage Flow of Public Information for Corporate Media Center (Prior to JIC Activation)

C. Emergency Communications Information Flow (After JIC Activation)

D. Public Response

E. Emergency Communications Reporting Structure

5.0 EMERGENCY COMMUNICATIONS FACILITY LOCATIONS AND FUNCTIONS

The PI Director is responsible for all emergency communications response activities and staff.

At an alert classification or higher, the Emergency Communications public response will be handled initially from the CMC by the PI Director. The PI Director and the Nuclear Spokesperson will contact the EOF Manager for briefing on the emergency. The EOF will issue an Initial News Release (INR).

If the decision is made to activate the JIC, the PI Director and the Nuclear Spokesperson move to that facility. Upon activation of the JIC, primary utility Emergency Communications response will be conducted from the JIC. The CMC staff will maintain communications with the JIC and EOF, keep APC/GPC/SNC personnel notified of plant conditions, and support JIC activities.

A. Corporate Media Center – Atlanta/Birmingham

1. The Corporate Media Center, located at the Atlanta/Birmingham corporate headquarters building of Georgia Power Company/Alabama Power Company, as appropriate, is the official location for coordination and issuance of news announcements and responses to news media inquiries until the JIC has been activated. The CMC may function as a Joint Public Information Center (JPIC) and may conduct these activities as long as appropriate and necessary.

2. Prior to activation of the JIC at an Alert or higher classification, corporate staff assigned to the JIC will assemble at the CMC. They will proceed to the JIC when directed by the Public Information Director.

3. The following staff are assigned to the Corporate Media Center

   - PI Director (until JIC activation)
   - CMC Manager
   - CMC Media Relations Representative
   - CMC Facility Coordinator
   - CMC Public Response Coordinator
   - CNC Public Response Team
   - Government Relations Liaison
   - Financial Response Liaison
   - Employee Communications Coordinator
   - Internet Coordinator
   - CMC Assistant
   - CMC Support Staff

4. Following activation of the JIC, the CMC staff responsibilities will continue. Responsibilities will include the following:

    a. Support of the JIC in all functions common to the two facilities such as telephone response, media monitoring, media response, news release reparation and distribution, etc.

    b. Functions specific to the CMC, including, but not limited to:
        - Employee communications
        - Financial response
        - Governmental response
        - Coordination with senior management
        - Internet activities
        - Providing additional trained staff to support the ECO effort

B. Emergency Operations Center (EOF)

1. The EOF will serve as the source of information about an incident to staff in the CMC and JIC.

2. Emergency Communications staff will:
    - Serve as the source of information for the Nuclear Spokesperson and PID
    - Develop and issue the INR
    - Develop and obtain nuclear approval for subsequent news releases
    - Confirm or correct rumors identified
    - Perform other communications responsibilities as needed

C. Joint Information Center

1. After the initial notification of an emergency at the Alert classification or higher, the PI Director decides whether to activate the JIC. Once the JIC is activated, it becomes the "single source" for media information.

2. Upon activation of the JIC, the PI Director transfers to that facility, maintaining overall responsibility for emergency communications response. The PI Director will manage the emergency communications response and is responsible for all functions of the JIC. These functions include:

   - Final approval and distribution of press statements
   - Coordination of press briefings and joint news announcements with interface with the media and local officials
   - Requests for interviews and photos
   - Recorded information line updates
   - Public response

   It is the PI Director's responsibility to assure all information is fully coordinated with and among the appropriate state and federal government public information officers (PIOs).

3. Upon activation, the JIC will obtain information from the EOF.

4. News briefings will be held at regular intervals during the emergency. The PI Director will preside over the press briefings. The Nuclear Spokesperson will explain emergency conditions and actions the Utility has taken at the plant. Off-site issues will be handled by off-site agency representatives.

5. If radiological conditions permit, an area near the plant may be designated as a site for television and news photographs. The Media Relations Representative, in consultation with the PI Director and the ED or his designee, and AEMA/GEMA management, as appropriate, will arrange for escorted visits to photographic locations.

6. The following positions will be assigned to the Joint Information Center:

   - PI Director
   - JIC Manager
   - Nuclear Spokesperson
   - JIC Media Relations Representative
   - JIC Public Response Coordinator
   - JIC Public Response Team
   - JIC Facility Coordinator
   - JIC Assistant
   - Community Relations Coordinator
   - Admin Staff
   - Technical Assistants
   - Security Officers
   - AV Support Staff

   NOTE: The JIC is sometimes referred to as the "Joint Media Center", “Joint Public Information Center”, or the “Joint Information Center” in off-site agency emergency plans. All titles refer to the same facility.

6.0 EMERGENCY COMMUNICATIONS PLAN ACTIVATION

A. Notification of Unusual Event (NOUE)

The SNC Corporate Communication Manager will be notified of an NOUE and will in turn notify APC Public Relations/GPC Corporate Communication management, as appropriate. The notification will include the status of the emergency and a brief description of the event. The SNC Corporate Communication Manager will confer with appropriate SNC management and affected owner-company management to determine the need for:

1. Additional notifications
2. Issuance of a news release

B. Alert and Higher Classifications

The SNC On-Call Media Rep will be advised of an event classified as Alert level or higher. The SNC rep will notify the APC/GPC On-Call Media Rep, as appropriate, with a description of the situation. The APC/GPC on-call media rep will notify the PID who will:

1. Formally activate the Emergency Communications Plan.

2. Notify emergency communications staff per Nuclear Management Procedure-Emergency Planning (NMP-EP-202).

3. Establish contact with the Emergency Operation Facility.

4. Establish contact with appropriate local, state and federal agencies.

5. Issue news release(s).

In addition, the PI Director will evaluate the following actions:

1. Activating the JIC and dispatch staff accordingly.

2. Conducting news briefings at the CMC or the JIC, which will include to the maximum extent possible, a panel composed of the Nuclear Spokesperson and representatives of government agencies.

7.0 EMERGENCY COMMUNICATIONS STAFF FUNCTIONS

The following is a description of responsibilities of principal Emergency Communications staff.

A. Public Information Director (PID):

The Public Information Director (PID) is responsible for directing all emergency communications personnel assignments. The PID, or a designee, is responsible for coordinating approvals and dissemination of all utility public information regarding the emergency. Upon activation of the CMC/JIC, the PID will be responsible for overall facility direction. Those duties may include coordinating approval and dissemination of utility news releases, facilitating news briefings, overseeing public response, meeting special media requests, and coordination among company and non-utility representatives in the facility and liaison with the media. The PID will be responsible for coordinating emergency communications response and coordinating with the SNC Corporate Duty Manager in evaluating the emergency's severity in terms of public interest and safety.

B. Nuclear Spokesperson

The Nuclear Spokesperson speaks on behalf of the company, providing plant status updates during news briefings. The Spokesperson also may do one-on-one media interviews. The position works with the Technical Assistant in keeping abreast of the event status and keeps the PID posted on that status. The position may first report to the EOF and then proceed to the CMC/JIC.

C. Technical Assistant (TA)

The Technical Assistant (TA) supports the Nuclear Spokesperson by gathering accurate and timely information about the event and the plant's status. Information is gathered via WebEOC, the plant status loop, and via direct contact with the EOC Manager – which the TA should maintain throughout an event. TA's may do media interviews at the discretion and direction of the PID.

D. CMC Manager

The CMC Manager will report to the CMC where he/she will coordinate activities. The CMC Manager may assume the PID role while a PID is en-route to the JIC. After JIC activation, the CMC Manager will assume full responsibility for CMC activities and maintain contact with the PID. The CMC Manager has responsibility for ensuring that the actions of the CMC positions are carried out.

E. CMC/JIC Public Response Coordinator

The CMC/JIC Public Response Coordinator will direct facility public response activities, keeping staff advised of current information and obtaining responses for questions they cannot answer. This includes referring specific inquiries to the proper person. The Coordinator is responsible for tracking rumors and ensuring that the Public Response team members have updated information on the rumor responses.

F. CMC Financial Response Liaison

The CMC Financial Response Liaison responds to financial inquiries from financial analysts, the public, media and stockholders regarding the effects a nuclear incident might have on Southern Company's financial position. This role identifies and establishes contact with key financial leaders and provides them updated information. The position maintains contact with the CMC Public Response Coordinator.

G. Government Relations Liaison

The Government Relations Liaison responds to inquiries from governmental sources. The role identifies and establishes contact with key government officials and provides them with updated information. The position maintains contact with the CMC Public Response Coordinator.

H. SNC News Writer

The SNC News Writer gathers information and prepares all news releases for the duration of an event. The News Writer coordinates technical approval with the SNC EOF Manager. This position works in the SNC EOF.

I. JIC Manager

The JIC Manager is responsible for coordinating operations of the facility and has responsibility for ensuring that the actions of the JIC positions represented on Attachment 1 are carried out. The position may assume Emergency Communications approval authority at the direction of the PID.

J. CMC/JIC Media Relations Representative(s)

The CMC/JIC Media Relations Representative(s) report to the CMC/JIC Manager and are responsible for implementing utility media response.

K. CMC/JIC Facility Coordinator

The CMC/JIC Facility Coordinator is responsible for setting up the facility and ensuring ongoing operability. The position supports the CMC/JIC Manager

L. Community Relations Coordinator

The Community Relations Coordinator identifies and initiates contacts with local public officials and leaders who need to be aware of the latest information about events. The position should advise the Public Response Coordinator and Governmental Relations Liaison of activities and contacts as appropriate

M. CMC/JIC Assistant

The CMC/JIC Assistant supports the PID and staff, coordinates approval and distribution of news releases, directs activities of the support staff and maintains an accurate record of JIC activities

N. CMC/JIC Support Staff

The CMC/JIC Support Staff provides administrative support for the facility.

O. Employee Communications Coordinator

The Employee Communications Coordinator disseminates plant status updates to Southern Company employees and customer service centers through a variety of means.

P. Internet Coordinator

The Internet Coordinator is responsible for updating and maintaining the company's external emergency page and monitoring the web for external coverage of the event.

Q. CMC/JIC Public Response Team

The CMC/JIC Public Response Team is responsible for responding to public inquiries. The team may include Telephone Responders, Media Monitor, Internet Coordinator, Employee Communications Coordinator, Financial Response Liaison and Governmental Relations Liaison.

8.0 NEWS RELEASES

The Utility will issue news releases concerning events, conditions and actions at the Plant. News releases are designed to be a written confirmation of events and public information which has been issued.

The SNC News Writer will write news releases in the EOF and obtain nuclear approval from the EOF Manager, then forward them to the CMC or JIC as appropriate. The Facility Manager at that location will obtain communications approval and direct distribution of the release.

9.0 PRESS BRIEFINGS

In the event of an incident at a nuclear plant media attention would be quick and overwhelming. Press briefings will be conducted to keep the media informed of events and activities relating to the emergency. Briefings will provide the most current, up-to-date information about events and response to the incident. They are also a primary means of addressing rumors or inaccurate information identified in our publics.

Public Information Officers (PIOs) from all offsite agencies responding to the emergency will be encouraged to participate in the briefings to discuss their particular activities.

The emphasis of the briefings will be on public safety

10.0 PUBLIC RESPONSE

Upon announcement of an emergency situation, misinformation and rumors can be expected to evolve. The following Public Response policies shall be instituted and followed upon the activation of the ECP.

Rumors will be addressed through a policy of open and candid communications with the news media and general public.

A. All appropriate information will be released as clearly, concisely and quickly as possible. Public announcements will be made on a frequent and regular basis.

B. An official Utility spokesperson will be designated as the source of new or updated official information about the incident.

C. Public response will encompass a number of activities to ensure accurate information is disseminated. These may include:

- Recorded messages containing the most current information,
- Interaction with callers,
- Proactively providing information to the media and responding to their needs,
- Monitoring media broadcasts/outlets
- Employee communications
- Identifying, notifying and constantly updating specific publics, (i.e. financial centers, governmental Officials, etc.)
- Internet coordination

Public response activities will be coordinated with state agencies. The Prompt Notification System (PNS) will be activated by state or local EMA officials. PNS will direct area residents to local news broadcasts and/or the Emergency Alert System (EAS), which will serve as the primary source of official information for the public.

11.0 TELECOMMUNICATIONS

A. The CMC/JIC Facility Coordinator will be responsible for resolving problems and obtaining additional equipment needed for the facility.

B. Lines will be made available to the extent possible for off-site agency staff who bring fax machines, computers, and other equipment.

C. Telephone lines and equipment discussed above will be tested quarterly.

12.0 TRANSPORTATION

A. If directed, the CMC Assistant will arrange for ground transportation services for Emergency Communication Organization staff relocating to the JIC.

B. Special transportation arrangements, such as helicopter service between Birmingham, Atlanta, the affected plant, and the JIC, may be made available in an emergency.

13.0 SECURITY

A. APC/GPC corporate security will coordinate 24-hour security support at the CMC during an emergency.

B. At GPC JICs, GPC corporate security will coordinate security coverage. At Plant Vogtle, local law enforcement may supplement coverage until regular uniform coverage is available or as needed. At Plant Farley, Houston County EMA will arrange for staffing by Houston County Sheriff's Dept.

C. Company personnel, news personnel, industry representatives, government officials, and visitors will be asked to present identification and will be given an identification badge for admittance to the facility. This ID badge should be visible at all times.

14.0 PRINT AND AUDIOVISUAL AIDS

A. Press kits are stored at the JICs and at the CMCs. These kits will be updated regularly and will be available to all news media.

B. An emergency web page will be activated and will replace the normal web page on the operating company's Internet site in the event of an incident. The emergency page includes plant schematics, background information and directions to the JIC. News releases about the event will also be available here.

C. Maps, photographs, and schematics of the plant are stored at the CMCs and JICs for use during news briefings.

D. Videotape cassettes of plant exterior and interior views will be maintained and made available for distribution upon request to television stations.

15.0 SPECIAL REQUESTS

A. A Media Relations Representative will respond to requests for special interviews, films, photos, videotapes, etc.

B. Special requests may be refused either for safety or security reasons. In such cases, the reason for refusal will be clearly explained.

C. JIC staff personnel will accommodate photographers at the plant site as conditions warrant. Media escorts will be coordinated with AEMA/GEMA.

D. A Media Relations Representative or his designee will be present at all special interviews. Briefings and special interviews should be videotaped.

E. Industry experts from appropriate agencies (e.g. NEI, INPO) may be called upon to provide general background information to reporters but will not comment on the Plant's status. With knowledge of the PI Director, interviews with these individual will be arranged by the Media Relations Representative.

16.0 PUBLIC INFORMATION PLAN FOR RECOVERY

A. The lead emergency communications representative in the Recovery Organization will be the PI Director. This person, or his designee, will maintain close contact with the Recovery Manager. Emergency communications response will follow the guidelines and procedures described for accident response.

B. As conditions and public interest warrant, additional emergency communications personnel will be assigned to support information dissemination concerning recovery operations.

C. Information for possible release will be cleared with the Recovery manager and the PI Director and given to the media through established procedures.

D. All information will be released through established channels of communication to federal and state authorities, the utility industry, the public, and employees.

E. Advance notice will be given to the public through the media of any Utility action that will or may affect the health and safety of the plume exposure pathway EPZ residents. Information will be followed up with a news release as soon as possible.

17.0 TRAINING

A. Emergency Communications Staff Training

The APC/GPC Emergency Communications Coordinator will coordinate training for applicable emergency communications personnel once per calendar year. Training will provide an overview of the Emergency Communications Plan and specific staff position responsibilities. (See Table 1)

Individuals assigned key positions on the Emergency Communications staff will participate in training. GPC responders with duties directly related to their daily jobs may be exempted from review. Training documentation and records will be held at APC/GPC by the Emergency Communications Coordinator.

Evaluation of individual and team performance during exercises will also be used to measure training program effectiveness and to adjust course content.

B. News Media Training

A program will be offered each calendar year to acquaint the news media with the process for obtaining information during an emergency and with overall emergency preparedness at APC/GPC nuclear plants, as appropriate. The training will include information about the plant, radiation, and the role of the JIC.

Media participation as observers or “reporter players” during exercises can effectively enhance training. Media may be invited to participate in annual exercises.

18.0 PUBLIC INFORMATION AND EDUCATION PROGRAM

The goal of the public information program is to acquaint the general public with the emergency plans for the operation of APC/GPC nuclear plants, as appropriate, and actions the general public should take if a radiological emergency occurs. Such a program is essential to the overall welfare of area citizens. Any incident involving a nuclear plant or nuclear materials can easily become a "crisis" in the minds of those living in the area, unless they understand the plans and programs in place to respond should an emergency occur.

Only by keeping the public well informed will the Plants be able to operate for the maximum benefit of all concerned. The Public Education and Information Program will seek to:

- Explain to the public how they will be notified should an emergency occur at the plant. This will include information on the siren notification system and the reverse calling system, as appropriate.

- Educate the public about radiation and contamination.

- Help the public understand what their initial actions should be in an emergency.

- Familiarize the public with protective actions, e.g. evacuation routes and relocation centers, and sheltering which may be required and rationale behind recommendations for these actions.

- Provide information concerning methods for receiving additional information

- Ensure that special needs of the handicapped are understood

A. In order to help assure proper public reaction to an emergency notification, Alabama Power, Georgia Power and Southern Nuclear will keep state and local officials continuously informed of all details related to any emergency.

B. Several communications methods may be used to acquaint the public with plans for their protection during a Plant emergency. Means for accomplishing these methods will include one or more of the following activities as listed below. Effort will be concentrated upon providing information to the public by written material that is likely to be available in the residence and in locations frequented by transients. The information will also provide instructions as to what local media (radio and television stations) will be providing additional information in the event of an emergency.

    1. Placement of an advertisement in local telephone directories.

    2. Information in utility bills,

3. Signs displayed in public areas within the plume exposure EPZ. (e.g., commercial establishments, areas used by sportsmen, motels, gasoline stations, phone booths, etc.) Sign content and location distribution will be revised and redistributed as needed,

4. Distribution of an emergency information publications/leaflets,

5. Television or Radio,

6. Emergency Calendars,

7. Direct Mail-Newsletters,

8. Visitor Center availability to the public (when not restricted for Security reasons),

9. Information exchange meetings with government agencies and local officials as needed.

19.0 PROCEDURES

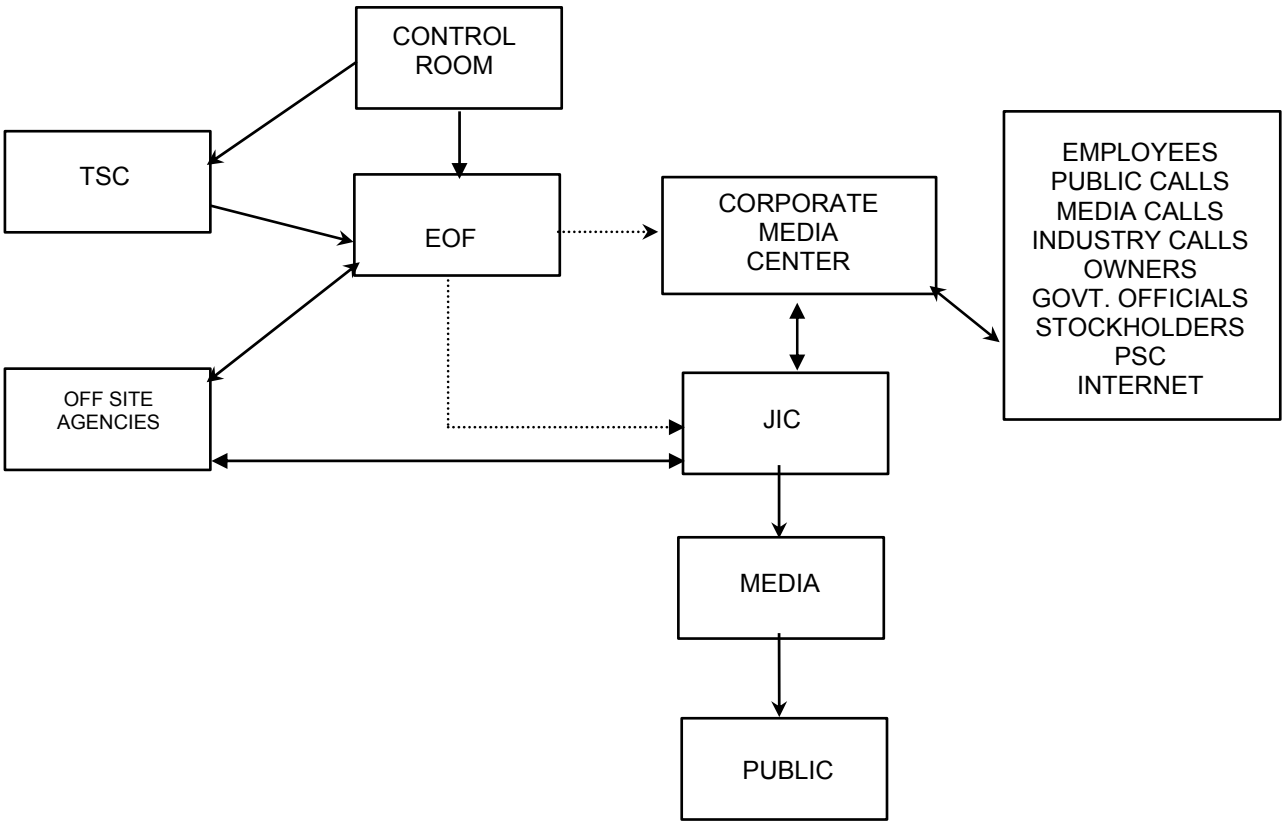
Implementing procedures (listed below) exist which will provide guidance and direction for carrying out the activities and responsibilities listed in this Plan. These procedures cover, but are not limited to, emergency communications staffing, activation of emergency communication facilities, development and issue of news releases, conduct of news briefings/media response, public response and public education/information dissemination.

- NMP-EP-201, Emergency Communications Administration
- NMP-EP-202, Emergency Communications Organization Activation and Notification
- NMP-EP-203, Corporate Media Center Operations
- NMP-EP-204, Emergency News Center/Joint Information Center Operations
- NMP-EP-205, Emergency Communications News Releases
- NMP-EP-206, Emergency Communications News Briefings

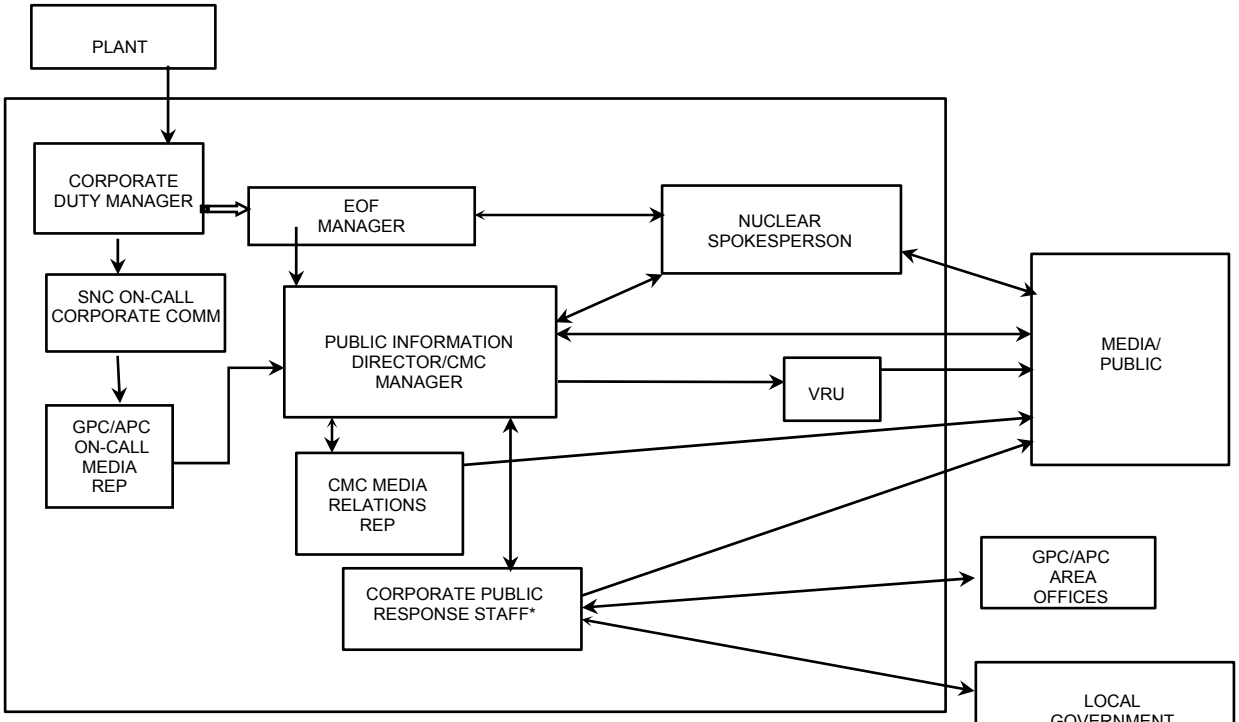
Emergency Response Organization Position	Training Subject Areas			
	Emergency	Media Training	Position	Spokesperson
Public Information Director	X		X	
CMC Manager	X		X	
JIC Manager	X		X	
Nuclear Spokesperson	X		X	X
CMC/JIC Media Relations Representative	X		X	
SNC News Writer	X		X	
Employee Communications Coordinator	X		X	
Public Response Teams	X		X	
CMC/JIC Public Response Coordinator	X		X	
Community Relations Coordinator	X		X	
CMC/JIC Assistant	X		X	
CMC/JIC Support Staff	X		X	
CMC/JIC Facility Coordinator	X		X	
Internet Coordinator	X		X	
News Media		X		

EMERGENCY COMMUNICATION ORGANIZATION TRAINING MATRIX

TABLE 1



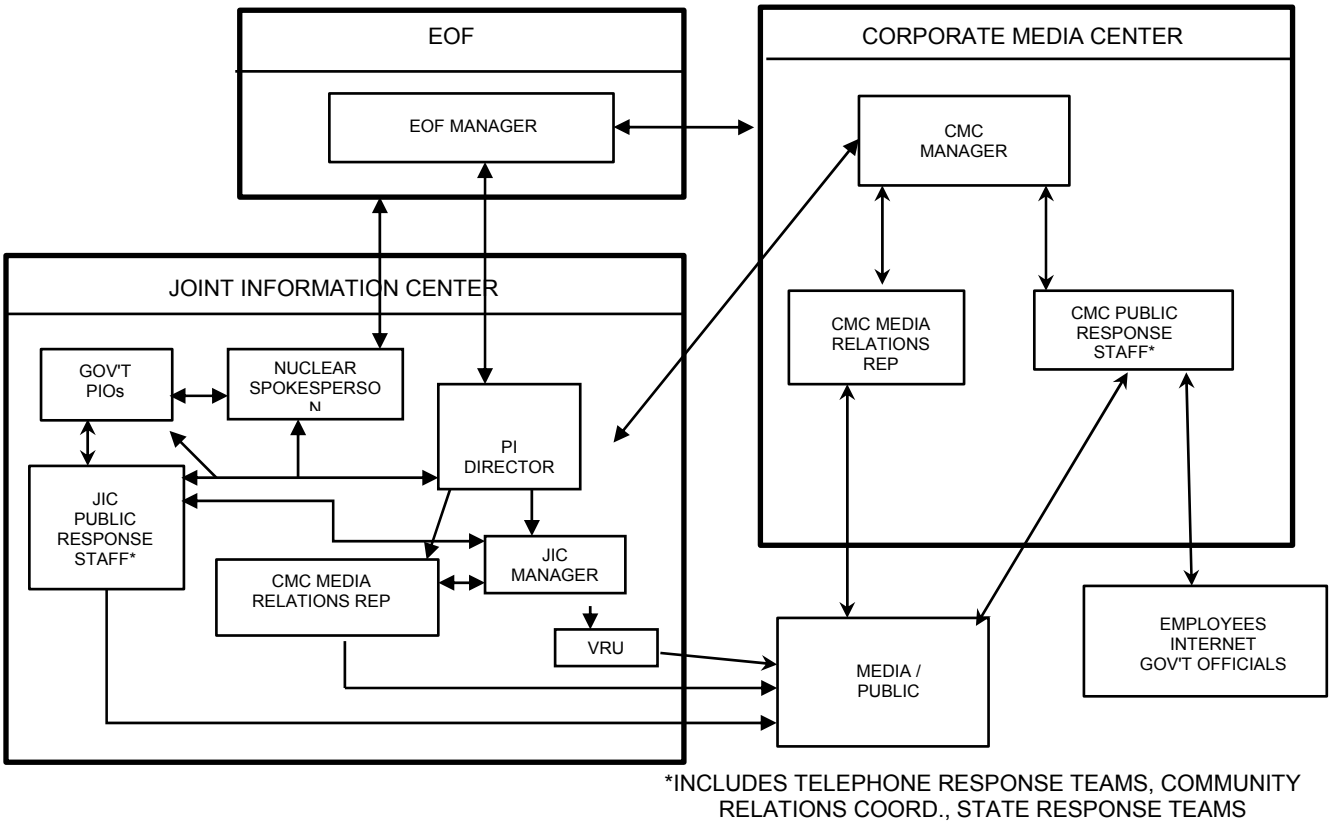
FLOW OF PUBLIC INFORMATION
DURING AN EMERGENCY
Figure A



*
Includes Corp Public Response Team, Employee Communications
Internet Activities, Financial Response & Government Relations, Community Relations

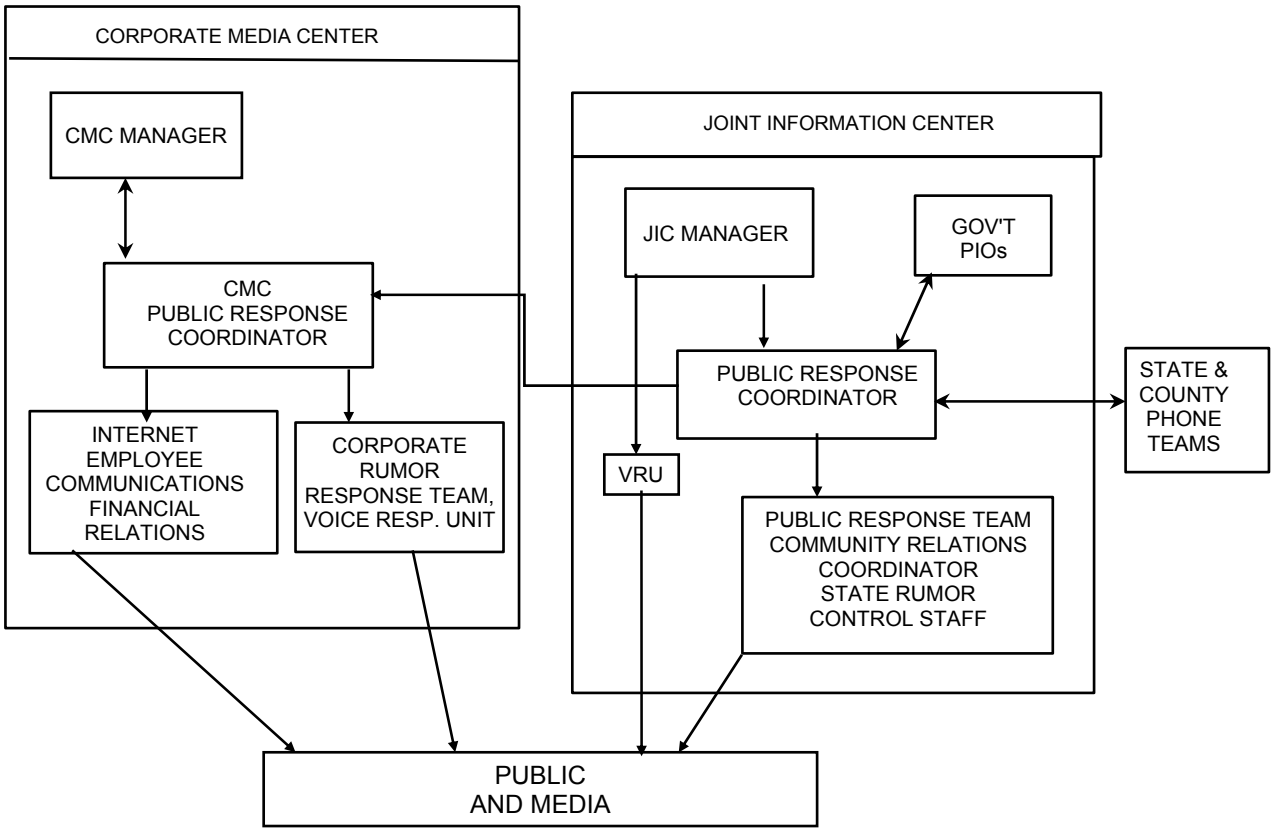
INITIAL/ EARLY FLOW OF EMERGENCY PUBLIC INFORMATION AT CORPORATE MEDIA CENTER (PRIOR TO JIC ACTIVATION)

Figure B



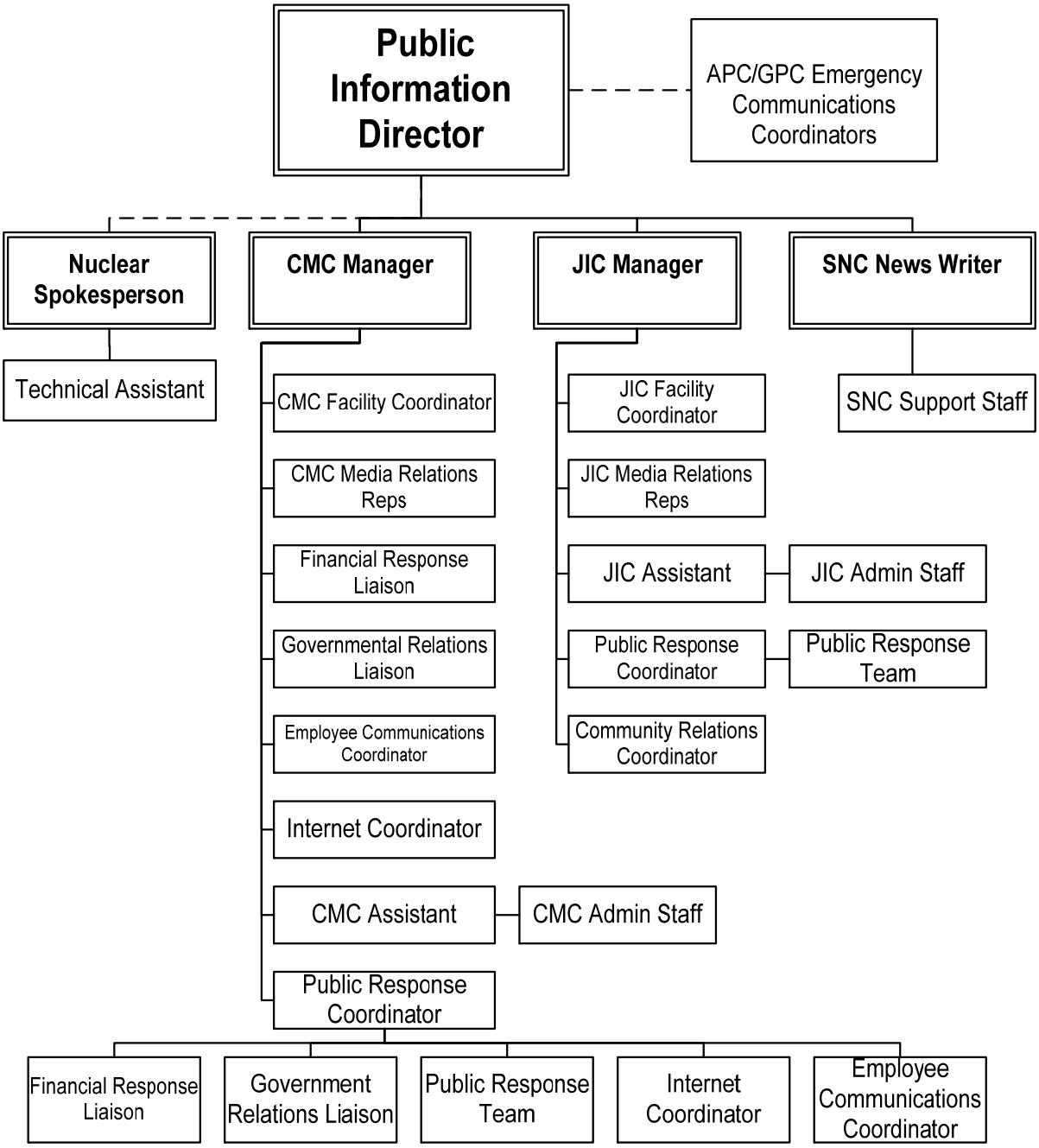
EMERGENCY COMMUNICATIONS INFORMATION FLOW AFTER JIC ACTIVATION

Figure C



PUBLIC RESPONSE FLOW CHART

Figure D



EMERGENCY COMMNICATIONS REPORTING STRUCTURE

FIGURE E

APPENDIX 11(K)

ASSESSMENT ACTIONS

ASSESSMENT ACTIONS

1. CLASSIFICATION OF EMERGENCIES

The classification system is based on the four emergency classes described in 10CFR50 Appendix E and NUREG 0654, established by the Nuclear Regulatory Commission (NRC), for grouping off-normal nuclear power plant conditions according to (1) their relative radiological seriousness, and (2) the time-sensitive onsite and off-site radiological emergency preparedness actions necessary to respond to such conditions. The existing radiological emergency classes, in ascending order of seriousness, are called:

- Notification of Unusual Event (NOUE)
- Alert
- Site Area Emergency (SAE)
- General Emergency (GE)

The classes, therefore, determine initial steps to be taken by on site and by corporate emergency response personnel. The emergency classes are used by offsite authorities to determine which of the preplanned actions to be taken by their emergency organizations.

An emergency classification is indicative of the status of the plant. Inputs to the emergency classification system include the status of various plant systems, radiation levels in and around plant areas, and the rate of release of radioactivity from the plant. These are termed Initiating Conditions which are a predetermined subset of nuclear power plant conditions where either the potential exists for a radiological emergency, or such an emergency has occurred.

The SNC classification scheme is based on NEI 99-01, Rev 4, Methodology for Development of Emergency Action Levels, January 2003 endorsed by Reg Guide 1.101, Rev 4, Emergency Planning and Preparedness for Nuclear Power Reactors. The Initiating Conditions lead each plant to a classification Implementing Procedure which contains the Threshold values for each Initiating Condition.

Each Initiating Condition has specific conditions associated that are termed Threshold Values. When an Initiating Condition is observed and the criteria of it's associated Threshold Values are met, an Emergency Action Level is met and the event is then classified and declared at the appropriate level.

The SNC Classification procedures are written to classify events based on meeting the Initiating Condition (IC) and a Threshold Value (TV) for an EAL considering each Unit independently. During events, the ICs and TVs are monitored and if conditions meet another higher EAL, that higher emergency classification is declared and appropriate notifications made. Notifications are made on a site basis. If both units are in concurrent classifications, the highest classification would be used for the notification and the other unit classification noted on the notification form.

At all times, when conditions present themselves that are not explicitly provided in the EAL scheme the Emergency Director has discretion to declare an event based on his knowledge of the emergency classes and judgment of the situation or condition.

Once an emergency classification is made, it cannot be downgraded to a lower classification. All the actions associated with the emergency classification level must be completed and then a termination of the event can be affected. At termination, on an event specific basis, the site can either enter normal operating conditions or enter a recovery condition with a recovery organization established for turnover from the ERO.

The described emergency classes and the emergency action levels which determine them are agreed on by SNC and State and local authorities. The emergency action levels will be reviewed by these officials annually.

a. Notification of Unusual Event

1. Description

The classification of Notification of Unusual Event applies to situations in which events are in process or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

2. Response

In the event of a Notification of Unusual Event, the Shift Manager will assesses the conditions and implement the Classification EIP.

The Emergency Organization will perform the following:

1) Inform State and local offsite authorities of the nature of the unusual event within 15 min. of classifying the emergency. Notify the Nuclear Regulatory Commission (NRC) as soon as possible (ASAP) but no later than 1 hour following classification of the emergency.

2) Augment on-shift resources, as needed.

3) Assess and respond to the event.

4) Escalate to a more severe class, if appropriate, or close out with a verbal summary to offsite authorities followed by a written summary within 24 hours.

b. Alert

1. Description

The classification of Alert applies to situations in which events are in process or have occurred which involve an, actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of intentional malicious dedicated efforts of hostile action. Any releases of

radioactive material for the Alert classification are expected to be limited to small fractions of the U.S. Environmental Protection Agency (EPA) Protective Action Guideline (PAG) exposure levels. The purpose of offsite alert is to assure that emergency personnel are readily available to respond if the situation becomes more serious or to perform confirmatory radiation monitoring if required and to provide offsite authorities current status information.

2. Response

In the event of an Alert the Shift Manager will assess the conditions and implement the Classification EIP.
The Emergency Organization will then perform the following:

1) Within 15 min. of classification, inform State and local offsite authorities of Alert Emergency and reasons for emergency. Notify the NRC ASAP but no later than 1 hour following classification of the emergency.

2) Augment resources and activate the emergency response facilities (e.g. Technical Support Center (TSC), Operational Support Center (OSC) and the Emergency Operations Facility (EOF)). These actions may be delayed for security based events at the discretion of the emergency director.

3) Assess and respond to the emergency.

4) Mobilize, and dispatch if necessary, onsite survey teams.

5) Provide periodic plant status updates to offsite authorities.

6) Provide periodic meteorological assessments to offsite authorities and, if any emergency releases are occurring, field monitoring team readings or dose estimates for actual releases.

7) Activate the Emergency Response Data System for the affected unit within 1 hour following declaration of the Alert.

8) Escalate to a more severe class, if appropriate, or close out the emergency class by verbal summary to offsite authorities followed by written summary within 8 hours of closeout.

c. Site Area Emergency

1. Description

The classification of Site Area Emergency applies to those events which are in progress or have occurred that involve actual or likely major failures of plant functions needed for protection of the public from radiation or contamination or security events that result in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to the likely failure of or; (2) prevent effective access to, equipment needed for the protection of the public. Any releases of radioactive material for the Site Area Emergency classification are not expected to exceed EPA Protective Action Guideline exposure levels except near the site boundary.

2. Response

In the event of a Site Area Emergency, the Shift Manager will assess the conditions and implement the Classification EIP.

The Emergency Organization will perform the following:

1) Within 15 min. of classification, inform State and local offsite authorities of Site Area Emergency and reasons for emergency. Notify the NRC ASAP but no later than 1 hour following classification of the emergency.

2) If necessary, provide protective action recommendations to State and local authorities.

3) Augment resources and activate the emergency response facilities (e.g. Technical Support Center (TSC), Operational Support Center (OSC), and the Emergency Operating Facility (EOF)). These actions may be delayed for security based events at the discretion of the emergency director.

4) Assess and respond to the emergency.

5) Dispatch as necessary onsite and offsite survey teams.

6) Dedicate individuals for plant status updates to offsite authorities and periodic press briefings.

7) On a periodic basis, make senior technical and management staff available for consultation with the NRC and State officials.

8) Provide meteorological information and dose estimates to offsite authorities for actual releases via a dedicated individual.

8) Provide release and dose projections based on available plant condition information and foreseeable contingencies.

10) Activate the Emergency Response Data System for the affected unit within 1 hour following declaration of the Site Area Emergency.

11) Escalate to General Emergency, if appropriate, or close out the emergency class by briefing of offsite authorities followed by written summary within 8 hours of closeout.

d. General Emergency

1. Description

The classification of General Emergency applies to those events which are in progress or have occurred which involve actual or imminent substantial core degradation or melting with potential loss of containment integrity or security events that result in an actual loss of physical control of the facility. Release of radioactive material for the General Emergency classification can reasonably be expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

2. Response

In the event of a General Emergency the Shift Manager will assess the conditions and implement the Classification EIP.

The Emergency Organization will then perform the following:

1) Within 15 min. of classification, inform State and local offsite authorities of General Emergency and reason for emergency. Notify the NRC ASAP but no later than 1 hour following classification of the emergency.

2) Provide protective action recommendations to State and local authorities based upon plant conditions and/or actual or projected releases of radioactive material.

3) Augment resources and activate the emergency response facilities (e.g. Technical Support Center (TSC), Operational Support Center (OSC), and the Emergency Operating Facility (EOF)). These actions may be delayed for security based events at the discretion of the emergency director.

4) Assess and respond to the emergency

5) Dispatch onsite and offsite survey teams.

6) Dedicate an individual for plant status updates to offsite authorities and periodic press briefings.

7) On a periodic basis, make senior technical and management staff available for consultation with the NRC and State officials..

8) Provide meteorological data and field monitoring team readings or dose estimates to offsite authorities for actual releases.

9) Provide release and dose projections based on plant condition and foreseeable contingencies.

10) Activate the Emergency Response Data System for the affected unit within 1 hour following declaration of the General Emergency.

11) Close out the emergency class by briefing of offsite authorities followed by written summary within 8 hours of closeout.

2. CLASSIFICATION PROCESS

The Classification Emergency Plan Implementing Procedure is used to classify the emergency condition upon recognition of an off- normal condition relative to an Initiating Condition.

Two Initiating Condition Matrices and a Fission Product Barrier Evaluation table are used depending on the initial mode of the unit. The Hot Initiating Condition matrix and the Fission Product Barrier Evaluation table are used when the unit is in the Technical Specification defined modes of Hot Shutdown, Hot Standby , Startup and Power Operation. A Cold Initiating Condition matrix is used when the unit is in the Cold Shutdown, Refueling, or Defueled modes. The IC Matrices are human factored to read from top to bottom General Emergency to Notification of Unusual Event within a category or subcategory.

To facilitate the expeditious classification of emergencies, the various initiating conditions which may result in an emergency class are grouped into six recognition categories as follows:

- Radiological (Hot and Cold – R series)
- Fission Product Barriers (Hot – F series)
- System Malfunctions (Hot – S series)
- System Malfunctions (Cold – C series)
- ISFSI (Hot and Cold – E series)
- Hazards (Hot and Cold – H series)

Within each category, sub categories and specific Initiating Conditions are identified. Each Initiating Condition has specific conditions associated that are termed Threshold Values. These Initiating Conditions, Threshold Values, and bases are provided in this Appendix.

The capability to assess, classify, and declare an emergency condition within 15 minutes after the availability of indications to plant operators that an EAL has been exceeded has been established and is outlined in applicable procedures. Emergency conditions are classified promptly upon identification that an emergency action level (EAL) threshold has been exceeded.

The 15-minute period encompasses all assessment, classification, and declaration actions associated with making an emergency declaration from the first availability of a plant indication or receipt of a report of an off-normal condition by plant operators up to and including the declaration of the emergency. If classifications and declarations are performed away from the CR, all delays incurred in transferring information from the CR (where the alarms, indications, and reports are first received) to the ERF (at which declarations are made) are included within the 15-minute criterion.

Hot Initiating Condition Matrix – Modes 1, 2, 3 and 4

Categories / Subcategories

	Radiological		Fission Product Barriers	System Malfunctions					Hazards					
	Release	Rad Levels		AC/DC Power	Rx and Core	Annunciators	RCS	Communications	Natural/ Destructive	Fire/ Explosion	Toxic / Flammable	Security	CR Evacuation	ED Discretion
General Emergency	**RG1**- Offsite Dose Resulting from an Actual or Imminent Release of Gaseous Radioactivity Exceeds 1000 mR TEDE **OR** 5000 mR Thyroid CDE for the Actual or Projected Duration of the Release Using Actual Meteorology.		**FG1** - Loss of ANY Two Barriers **AND** Loss or Potential Loss of Third Barrier	**SG1** - Prolonged Loss of All Offsite Power **AND** Prolonged Loss of All Onsite AC Power to Essential Busses	**SG2** - Failure of the Reactor Protection System to Complete an Automatic Trip **AND** Manual Trip was NOT Successful **AND** there is Indication of an Extreme Challenge to the Ability to Cool the Core.				**ISFSI**			**HG1** – HOSTILE ACTION Resulting in Loss Of Physical Control of the Facility		**HG2** -Other Conditions Existing Which in the Judgment of the Emergency Director Warrant Declaration of General Emergency
Site Area Emergency	**RS1** - Offsite Dose Resulting from an Actual or Imminent Release of Gaseous Radioactivity Exceeds 100 mR TEDE **OR** 500 mR Thyroid CDE for the Actual or Projected Duration of the Release.		**FS1** - Loss or Potential Loss of ANY Two Barriers	**SS1** - Loss of All Offsite Power **AND** Loss of All Onsite AC Power to Essential Busses **SS3** - Loss of All Vital DC Power	**SS2** - Failure of Reactor Protection System Instrumentation to Complete or Initiate an Automatic Reactor Trip Once a Reactor Protection System Setpoint Has Been Exceeded **AND** Manual Trip Was NOT Successful. **SS4** - Complete Loss of Heat Removal Capability	**SS6**Inability to Monitor a SIGNIFICANT TRANSIENT in Progress						**HS4** – HOSTILE ACTION within the PROTECTED AREA	**HS2** – Control Room Evacuation Has Been Initiated **AND** Plant Control Cannot Be Established	**HS3** - Other Conditions Existing Which in the Judgment of the Emergency Director Warrant Declaration of Site Area Emergency
Alert	**RA1** - Any UNPLANNED Release of Gaseous or Liquid Radioactivity to the Environment that Exceeds 200 Times the Radiological Effluent Technical Specifications for 15 Minutes or Longer.	**RA2** - Damage to Irradiated Fuel **OR** Loss of Water Level that Has or Will Result in the Uncovering of Irradiated Fuel Outside the Reactor Vessel **RA3** - Release of Radioactive Material or Rises in Radiation Levels Within the Facility That Impedes Operation of Systems Required to Maintain Safe Operations or to Establish or Maintain Cold Shutdown	**FA1** - ANY Loss or ANY Potential Loss of **EITHER** Fuel Clad **OR** RCS	**SA5** - AC power capability to essential busses reduced to a single power source for greater than 15 minutes such that any additional single failure would result in station blackout.	**SA2** - Failure of Reactor Protection System Instrumentation to Complete or Initiate an Automatic Reactor Trip Once a Reactor Protection System Setpoint Has Been Exceeded **AND** Manual Trip Was Successful.	**SA4** - UNPLANNED Loss of Most or All Annunciation or Indication in the control room With **EITHER** a (1) a SIGNIFICANT TRANSIENT in Progress, **OR** (2) Compensatory Non-Alarming Indicators are Unavailable			**HA1** - Natural and Destructive Phenomena Affecting the Plant VITAL AREA	**HA2** - FIRE **OR** EXPLOSION Affecting the Operability of Plant Safety Systems Required to Establish or Maintain Safe Shutdown	HA3 - Release of Toxic, Asphyxiant or Flammable Gases Within or Contiguous to a VITAL AREA Which Jeopardizes Operation of Systems Required to Maintain Safe Operations or Establish or Maintain Safe Shutdown.	**HA4** - HOSTILE ACTION within the OWNER CONTROLLED AREA or airborne attack threat	**HA5** - Control Room Evacuation Has Been Initiated	**HA6** - Other Conditions Existing Which in the Judgment of the Emergency Director Warrant Declaration of an Alert
Notification of Unusual Event	**RU1** - Any UNPLANNED Release of Gaseous or Liquid Radioactivity to the Environment that Exceeds Two Times the Radiological Effluent Technical Specifications for 60 Minutes or Longer.	**RU2** - Unexpected Rise in Plant Radiation	**FU1** - ANY Loss **OR** ANY Potential Loss of Containment	**SU1** - Loss of All Offsite Power to Essential Busses for GREATER THAN 15 Minutes	**SU2** - Inability to Reach Required Shutdown Within Technical Specification Limits **SU4** - Fuel Clad Degradation **SU8** - Inadvertent Criticality	**SU3** - UNPLANNED Loss of Most or All Safety System Annunciation or Indication in The Control Room for Greater Than 15 Minutes	**SU5** - RCS Leakage	**SU6** - UNPLANNED Loss of All Onsite **OR** Offsite Communications Capabilities	**HU1** – Natural and Destructive Phenomena Affecting the PROTECTED AREA **E-HU1** – Damage to a loaded cask CONFINEMENT BOUNDARY	**HU2** - FIRE Within PROTECTED AREA Boundary Not Extinguished Within 15 Minutes of Detection	**HU3** - Release of Toxic, Asphyxiant, or Flammable Gases Deemed Detrimental to Normal Operation of the Plant	**HU4** - Confirmed SECURITY CONDITION or threat Which Indicates a Potential Degradation in the Level of Safety of the Plant		**HU5** - Other Conditions Existing Which in the Judgment of the Emergency Director Warrant Declaration of a NOUE

	Cold Initiating Condition Matrix – Modes 5, 6 and Defueled												
	Categories / Subcategories												
	Radiological		System Malfunctions					Hazards					
	Release	Rad levels	AC/DC Power	Rx and Core	Heat Removal	RCS	Communications	Natural/ Destructive	Fire/ Explosion	Toxic / Flammable	Security	CR Evacuation	ED Discretion
General Emergency	**RG1**- Offsite Dose Resulting from an Actual or Imminent Release of Gaseous Radioactivity Exceeds 1000 mR TEDE **OR** 5000 mR Thyroid CDE for the Actual or Projected Duration of the Release Using Actual Meteorology.			**CG1** - Loss of RPV Inventory Affecting Fuel Clad Integrity with Containment Challenged with Irradiated Fuel in the RPV.				**ISFSI**			**HG1** - HOSTILE ACTION Resulting in Loss Of Physical Control of the Facility		**HG2** - Other Conditions Existing Which in the Judgment of the Emergency Director Warrant Declaration of General Emergency
Site Area Emergency	**RS1** - Offsite Dose Resulting from an Actual or Imminent Release of Gaseous Radioactivity Exceeds 100 mR TEDE **OR** 500 mR Thyroid CDE for the Actual or Projected Duration of the Release.			**CS2** - Loss of RPV Inventory Affecting Core Decay Heat Removal Capability with Irradiated Fuel in the RPV. **Mode 6 only**		**CS1** - Loss of RPV Inventory Affecting Core Decay Heat Removal Capability. **Mode 5 only**					**HS4** – HOSTILE ACTION within the PROTECTED AREA	**HS2** - Control Room Evacuation Has Been Initiated **AND** Plant Control Cannot Be Established	**HS3** - Other Conditions Existing Which in the Judgment of the Emergency Director Warrant Declaration of Site Area Emergency
Alert	**RA1** - Any UNPLANNED Release of Gaseous or Liquid Radioactivity to the Environment that Exceeds 200 Times the Radiological Effluent Technical Specifications for 15 Minutes or Longer.	**RA2** - Damage to Irradiated Fuel **OR** Loss of Water Level that Has or Will Result in the Uncovering of Irradiated Fuel Outside the Reactor Vessel **RA3** - Release of Radioactive Material or Rises in Radiation Levels Within the Facility That Impedes Operation of Systems Required to Maintain Safe Operations or to Establish or Maintain Cold Shutdown	**CA3** - Loss of All Offsite Power **AND** Loss of All Onsite AC Power to Essential Busses.	**CA2** - Loss of RPV Inventory with Irradiated Fuel in the RPV. **Mode 6 only**	**CA4** - Inability to Maintain Plant in Cold Shutdown with Irradiated Fuel in the RPV.	**CA1** - Loss of RCS Inventory. **Mode 5 only**		**HA1** - Natural and Destructive Phenomena Affecting the Plant VITAL AREA	**HA2** - FIRE **OR** EXPLOSION Affecting the Operability of Plant Safety Systems Required to Establish or Maintain Safe Shutdown	**HA3** - Release of Toxic, Asphyxiant or Flammable Gases Within or Contiguous to a VITAL AREA Which Jeopardizes Operation of Systems Required to Maintain Safe Operations or Establish or Maintain Safe Shutdown.	**HA4** - HOSTILE ACTION within the OWNER CONTROLLED AREA or airborne attack threat.	**HA5** - Control Room Evacuation Has Been Initiated	**HA6** - Other Conditions Existing Which in the Judgment of the Emergency Director Warrant Declaration of an Alert
Notification of Unusual Event	**RU1** – Any UNPLANNED Release of Gaseous or Liquid Radioactivity to the Environment that Exceeds Two Times the Radiological Effluent Technical Specifications for 60 Minutes or Longer.	**RU2** – Unexpected Rise in Plant Radiation	**CU3** – Loss of All Offsite Power to Essential Busses for Greater Than 15 Minutes. **CU7** - Unplanned Loss of Required DC Power for Greater than 15 Minutes.	**CU8** - Inadvertent Criticality	**CU4** - Unplanned Loss of Decay Heat Removal Capability with Irradiated Fuel in the RPV.	**CU1** - RCS Leakage **Mode 5 only** **CU2** - Unplanned Loss of RCS Inventory with Irradiated Fuel in the RPV **Mode 6 only**	**CU6** - UNPLANNED Loss of All Onsite **OR** Offsite Communications Capabilities	**HU1** - Natural and Destructive Phenomena Affecting the PROTECTED AREA **E-HU1** – Damage to a loaded cask CONFINEMENT BOUNDARY	**HU2** - FIRE Within PROTECTED AREA Boundary Not Extinguished Within 15 Minutes of Detection	**HU3** - Release of Toxic, Asphyxiant, or Flammable Gases Deemed Detrimental to Normal Operation of the Plant	**HU4** - Confirmed SECURITY CONDITION or threat Which Indicates a Potential Degradation in the Level of Safety of the Plant		**HU5** - Other Conditions Existing Which in the Judgment of the Emergency Director Warrant Declaration of a NOUE

Fission Product Barrier Evaluation Modes 1, 2, 3 and 4

General Emergency	Site Area Emergency	Alert	Unusual Event
FG1 Loss of ANY Two Barriers AND Loss or Potential Loss of Third Barrier	**FS1** Loss or Potential Loss of ANY Two Barriers	**FA1** ANY Loss or ANY Potential Loss of EITHER Fuel Clad OR RCS	**FU1** ANY Loss or ANY Potential Loss of Containment

Fuel Clad Barrier

Loss	Potential Loss
1. Critical Safety Function Status Core-Cooling RED	**1. Critical Safety Function Status** Core Cooling-ORANGE **OR** Heat Sink-RED
2. Primary Coolant Activity Level Indications of RCS Coolant Activity greater than 300 µCi/gm Dose Equivalent I-131	2. Primary Coolant Activity Level Not Applicable
3. Core Exit Thermocouple Readings 5th Hottest CETC greater than 1200°F	**3. Core Exit Thermocouple Readings** 5th Hottest CETC greater than 700°F
4. Reactor Vessel Water Level Not Applicable	**4. Reactor Vessel Water Level** RVLS Plenum LEVEL less than 0%
5. Containment Radiation Monitoring Containment Radiation Monitor RE-27 A **OR** B greater than 600 R/hr	5. Containment Radiation Monitoring Not Applicable
6. Other Indications Not applicable	6. Other Indications Not applicable
7. Emergency Director Judgment Judgment by the ED that the Fuel Clad Barrier is lost. Consider conditions not addressed and inability to determine the status of the Fuel Clad Barrier	**7. Emergency Director Judgment** Judgment by the ED that the Fuel Clad Barrier is potentially lost. Consider conditions not addressed and inability to determine the status of the Fuel Clad Barrier.

RCS Barrier

Loss	Potential Loss
1. Critical Safety Function Status Not Applicable	**1. Critical Safety Function Status** RCS Integrity-RED **OR** Heat Sink-RED
2. RCS Leak Rate RCS subcooling less than 16°F {less than 45° F Adverse} due to an RCS leak greater than Charging / RHR capacity	**2. RCS Leak Rate** Non-isolable RCS leak (including SG tube Leakage) greater than120 GPM.
3. SG Tube Rupture EEP-3.0 entered due to SG tube rupture resulting in an ECCS actuation	3. SG Tube Rupture Not Applicable
4. Containment Radiation Monitoring CTMT Rad Monitor RE-2 greater than 1.0 R/hr OR CTMT Radiation Monitor RE-7 greater than 500 mR/hr	4. Containment Radiation Monitoring Not Applicable
5. Other Indications Not applicable	**5. Other Indications** Unexplained level rise in ANY of the following: Containment sump Reactor Coolant Drain Tank (RCDT) Waste Holdup Tank (WHT)
6. Emergency Director Judgment Judgment by the ED that the RCS Barrier is lost. Consider conditions not addressed and inability to determine the status of the RCS Barrier	**6. Emergency Director Judgment** Judgment by the ED that the RCS Barrier is potentially lost. Consider conditions not addressed and inability to determine the status of the RCS Barrier.

Containment Barrier

Loss	Potential Loss
1. Critical Safety Function Status Not Applicable	**1. Critical Safety Function Status** Containment-RED
2. Containment Pressure Rapid unexplained CTMT pressure lowering following initial pressure rise **OR** Intersystem LOCA indicated by CTMT pressure or sump level response not consistent with a loss of primary or secondary coolant	**2. Containment Pressure** CTMT pressure greater than 54 psig and rising **OR** CTMT hydrogen concentration greater than 6% **OR** CTMT CSF - ORANGE **AND** Less than the following minimum operable equipment: One CTMT fan cooler **AND** One train of CTMT spray
3. Core Exit Thermocouple Reading Not applicable	**3. Core Exit Thermocouple Reading** CORE COOLING CSF - RED **OR** - ORANGE for greater than 15min **AND** RVLS LEVEL less than 0%
4. SG Secondary Side Release with Primary to Secondary Leakage RUPTURED S/G is also FAULTED outside of containment **OR** Primary-to-Secondary leakrate greater than 10 gpm with nonisolable steam release from affected S/G to the environment	4. SG Secondary Side Release with P-to-S Leakage Not applicable
5. CNMT Isolation Valves Status After CNMT Isolation CTMT isolation valves **OR** dampers **NOT** closed **AND** downstream pathway to the environment exists after Containment Isolation	5. CNMT Isolation Valves Status After CNMT Isolation Not Applicable
6. Significant Radioactive Inventory in Containment Not Applicable	**6. Significant Radioactive Inventory in Containment** CTMT Rad monitor RE-27 A OR B greater than 8000 R/hr
7. Other Indications Pathway to the environment exists based on VALID RE-10, RE-14, RE-21, **OR** RE-22 Alarms	7. Other Indications Not applicable
8. Emergency Director Judgment Judgment by the ED that the CTMT Barrier is lost. Consider conditions not addressed and inability to determine the status of the CTMT Barrier	**8. Emergency Director Judgment** Judgment by the ED that the CTMT Barrier is potentially lost. Consider conditions not addressed and inability to determine the status of the CTMT Barrier

Initiating Condition

Offsite Dose Resulting from an Actual or Imminent Release of Gaseous Radioactivity Exceeds 1000 mR TEDE OR 5000 mR Thyroid CDE for the Actual or Projected Duration of the Release Using Actual Meteorology.

Operating Mode Applicability: All

Threshold Values: (1 **OR** 2 **OR** 3)

NOTE: If dose assessment results are available at the time of declaration, the classification should be based on Threshold Value #2 instead of Threshold Value #1.While necessary declarations should not be delayed awaiting results, the dose assessment should be initiated / completed in order to determine if the classification should be subsequently escalated.

NOTE: The Emergency Director should not wait until 15 minutes has elapsed, but should declare the event as soon as it is determined that the release duration has or will likely exceed 15 minutes.

1. VALID reading on any of the following radiation monitors that exceeds OR expected to exceed the reading shown for 15 minutes OR longer:

Steam jet Air Ejector RE-15C	130 µCi/cc (130 R/hr)
Plant Vent Stack RE-29B (NG)	0.9 µCi/cc
Steam Generator Relief RE-60A,B,C	0.5 µCi/cc (0.5 R/hr)
TDAFW Steam Exhaust RE-60D	11 µCi/cc (11 R/hr)

2. Dose assessment using actual meteorology indicates doses greater than 1,000 mR TEDE **OR** 5,000 mR thyroid CDE at **OR** beyond the site boundary.

3. Field survey results indicate closed window dose rates exceeding 1,000 mR/hr expected to continue for more than one hour; **OR** analyses of field survey samples indicate thyroid CDE of 5,000 mR for one hour of inhalation, at **OR** beyond site boundary.

Basis:

VALID: an indication, report, or condition, is considered to be VALID when it is verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment.

This IC addresses radioactivity releases that result in doses at or beyond the site boundary that exceed the EPA Protective Action Guides (PAGs). Public protective actions will be necessary. Releases of this magnitude are associated with the failure of plant systems needed for the protection of the public and likely involve fuel damage. While these failures are addressed by other ICs, this IC provides appropriate diversity and addresses events which may not be able to be classified on the basis of plant status alone. It is important to note that, for the more severe accidents, the release may be unmonitored or there may be large uncertainties associated with the source term and/or meteorology.

The Emergency Director should not wait until 15 minutes has elapsed, but should declare the event as soon as it is determined that the release duration has or will likely exceed 15 minutes.

The monitor reading Threshold Values are determined using a dose assessment method that back calculates from the dose values specified in the IC. The meteorology and source term (noble gases, particulates, and halogens) used are the same as those used for determining the monitor reading Threshold Values in ICs RU1 and RA1. This protocol will maintain intervals between the Threshold Values for the four classifications. Since doses are generally not monitored in real-time, a release duration of one hour is assumed, and that the Threshold Values are based on a site boundary (or beyond) dose of 1,000 mR/hour whole body or 5,000 mR/hour thyroid, whichever is more limiting.

Since dose assessment is based on actual meteorology, whereas the monitor reading Threshold Values are not, the results from these assessments may indicate that the classification is not warranted, or may indicate that a higher classification is warranted. For this reason, emergency implementing procedures call for the timely performance of dose assessments using actual meteorology and release information. If the results of these dose assessments are available when the classification is made the dose assessment results override the monitor reading Threshold Values. Classification should not be delayed pending the results of these dose assessments.

RS1

Initiating Condition

Offsite Dose Resulting from an Actual or Imminent Release of Gaseous Radioactivity Exceeds 100 mR TEDE **OR** 500 mR Thyroid CDE for the Actual or Projected Duration of the Release.

Operating Mode Applicability: All

Threshold Values: (1 **OR** 2 **OR** 3)

NOTE: If dose assessment results are available at the time of declaration, the classification should be based on Threshold Value #2 instead of Threshold Value #1.While necessary declarations should not be delayed awaiting results, the dose assessment should be initiated / completed in order to determine if the classification should be subsequently escalated.

NOTE: The Emergency Director should not wait until 15 minutes has elapsed, but should declare the event as soon as it is determined that the release duration has or will likely exceed 15 minutes.

1. VALID reading on any of the following radiation monitors that exceeds **OR** is expected to exceed the reading shown for 15 minutes **OR** longer:

Steam jet Air Ejector RE-15C	13 µCi/cc (13 R/hr)
Plant Vent Stack RE-29B (NG)	0.09 µCi/cc
Steam Generator Relief RE-60A,B,C	0.05 µCi/cc (0.05 R/hr)
TDAFW Steam Exhaust RE-60D	1.1 µCi/cc (1.1 R/hr)

2. Dose assessment using actual meteorology indicates doses greater than 100 mR TEDE **OR** 500 mR thyroid CDE at **OR** beyond the site boundary.

3. Field survey results indicate closed window dose rates exceeding 100 mR/hr expected to continue for more than one hour; **OR** analyses of field survey samples indicate thyroid CDE of 500 mR for one hour of inhalation, at **OR** beyond the site boundary.

Basis:

VALID: an indication, report, or condition, is considered to be VALID when it is verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel, such that doubt related to the indicator's operability, the

condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment.

This IC addresses radioactivity releases that result in doses at or beyond the site boundary that exceed a small fraction of the EPA Protective Action Guides (PAGs). Releases of this magnitude are associated with the failure of plant systems needed for the protection of the public.

The Emergency Director should not wait until 15 minutes has elapsed, but should declare the event as soon as it is determined that the release duration has or will likely exceed 15 minutes.

The monitor reading Threshold Values are determined using a dose assessment method that back calculates from the dose values specified in the IC. The meteorology and source term (noble gases, particulates, and halogens) used is the same as those used for determining the monitor reading Threshold Values in ICs RU1 and RA1. This protocol maintains intervals between the Threshold Values for the four classifications. Since doses are generally not monitored in real-time, a release duration of one hour is assumed, and that the Threshold Values be based on a site boundary (or beyond) dose of 100 mR/hour whole body or 500 mR/hour thyroid, whichever is more limiting.

The release rates which result in site boundary doses of 100 mR TEDE are in excess of the range of the monitors listed in RU1 and RA1.

Since dose assessment is based on actual meteorology, whereas the monitor reading Threshold Values are not, the results from these assessments may indicate that the classification is not warranted, or may indicate that a higher classification is warranted. For this reason, emergency implementing procedures should call for the timely performance of dose assessments using actual meteorology and release information. If the results of these dose assessments are available when the classification is made (*e.g.*, initiated at a lower classification level), the dose assessment results override the monitor reading Threshold Values. Classification should not be delayed pending the results of these dose assessments.

RA1

Initiating Condition

Any UNPLANNED Release of Gaseous or Liquid Radioactivity to the Environment that Exceeds 200 Times the Radiological Effluent Technical Specifications for 15 Minutes or Longer.

Operating Mode Applicability: All

Threshold Values: (1 **OR** 2 **OR** 3)

NOTE: The Emergency Director should not wait until 15 minutes has elapsed, but should declare the event as soon as it is determined that the release duration has or will likely exceed 15 minutes.

1. VALID reading on any effluent monitor that exceeds 200 times the alarm setpoint established by a current radioactivity discharge permit for 15 minutes **OR** longer.

Monitor		200 X Setpoint Value
Liquid Radwaste Effluent Line (RE-18)		200 x release permit setpoint (planned release) Greater than **OR** equal to $1x10^6$ cpm (no planned release).
Steam Generator Blowdown Effluent Line (RE-23B)		2.8×10^5 cpm
Steam Jet Air Ejector RE-15A		3.5×10^4 cpm
Plant Vent Gas	RE-14	200 x release permit setpoint (planned release) Greater than **OR** equal to $1 x10^6$ cpm (no planned release).
	RE-22	4.0×10^4 cpm
	RE-29B (NG)	8.9×10^{-2} µCi/cc

2. VALID reading on any of the following radiation monitors that exceeds the reading shown for 15 minutes **OR** longer:

Main Steam Atmos Relief (R60A,B,C)	1.4×10^1 R/hr
TDAFW Exhaust (R60D)	1.4×10^1 R/hr

3. Confirmed sample analyses for gaseous or liquid releases indicates concentrations **OR** release rates in excess of 200 times Technical Specification 5.5.4.b as confirmed by ODCM , with a release duration of 15 minutes **OR** longer.

Basis:

UNPLANNED: a parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

VALID: an indication, report, or condition, is considered to be VALID when it is verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment.

This IC addresses a potential or actual decline in the level of safety of the plant as indicated by a radiological release that exceeds regulatory commitments for an extended period of time. The occurrence of extended, uncontrolled radioactive releases to the environment is indicative of a degradation in these features and/or controls.

UNPLANNED, as used in this context, includes any release for which a radioactivity discharge permit was not prepared, or a release that exceeds the conditions (e.g., minimum dilution flow, maximum discharge flow, alarm setpoints, etc.) on the applicable permit. **The Emergency Director should not wait until 15 minutes has elapsed, but should declare the event as soon as it is determined that the release duration has or will likely exceed 15 minutes.** Also, if an ongoing release is detected and the starting time for that release is unknown, the Emergency Director should, in the absence of data to the contrary, assume that the release has exceeded 15 minutes.

Threshold Value #1 addresses radioactivity releases that for whatever reason cause effluent radiation monitor readings that exceed two hundred times the alarm setpoint established by the radioactivity discharge permit. This alarm setpoint may be associated with a planned batch release, or a continuous release path.

Threshold Value #2 is similar to Threshold Value #1, but is intended to address effluent or accident radiation monitors on non-routine release pathways for which a discharge permit would not normally be prepared.

Threshold Value #3 addresses uncontrolled releases that are detected by sample analyses, particularly on unmonitored pathways, e.g., spills of radioactive liquids into storm drains, heat exchanger leakage in river water systems, etc.

Threshold Values #1 and #2 directly correlate with the IC since annual average meteorology is required to be used in showing compliance with the RECP and is used in calculating the alarm setpoints.

Due to the uncertainty associated with meteorology, emergency implementing procedures should call for the timely performance of dose assessments using actual (real-time) meteorology in the event of a gaseous radioactivity release of this magnitude. The results of these assessments should be compared to the ICs RS1 and RG1 to determine if the event classification should be escalated.

¶RA2

Initiating Condition

Damage to Irradiated Fuel **OR** Loss of Water Level that Has or Will Result in the Uncovering of Irradiated Fuel Outside the Reactor Vessel.

Operating Mode Applicability: All

Threshold Values: (1 **OR** 2)

1. UNPLANNED VALID alarm on any of the following radiation monitors:

Drumming Station RE-0008
Containment Purge Ventilation Monitor RE-24A **OR** B
Spent Fuel Pool Ventilation Monitor RE-25A **OR** B
Spent Fuel Pool Area Radiation Monitor RE-5

2. Loss of water level that has or will result in the uncovering of irradiated fuel outside the Reactor Vessel as indicated by ANY of the following:

Report of personnel during fuel assembly movements.	
Spent Fuel Pool Storage	Less than El 129
Transfer Canal	Less than El 116.
Reactor Core Elevation	Less than El 118

Basis:

VALID: an indication, report, or condition, is considered to be VALID when it is verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment.

UNPLANNED: a parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

This IC addresses specific events that have resulted, or may result, in unexpected rises in radiation dose rates within plant buildings, and may be a precursor to a radioactivity release to the environment. These events represent a loss of control over radioactive material and represent a degradation in the level of safety of the plant.

Threshold Value #1 addresses radiation monitor indications of fuel uncovery and/or fuel damage. Raised readings on ventilation monitors may be indication of a radioactivity release

from the fuel, confirming that damage has occurred. Raised background at the monitor due to water level lowering may mask raised ventilation exhaust airborne activity and needs to be considered. Application of these Initiating Conditions requires understanding of the actual radiological conditions present in the vicinity of the monitor.

In Threshold Value #2, indications include water level and personnel reports. Visual observation will be the primary indicator for spent fuel pool and fuel movement activities. Personnel report during fuel assembly movements is included to ensure that reports of actual or potential fuel uncovery is classified. If available, video cameras may allow remote observation. Depending on available level indication, the declaration threshold may need to be based on indications of water makeup rate or lowering in refueling water storage tank level.

¶RA3

Initiating Condition

Release of Radioactive Material or Rises in Radiation Levels Within the Facility That Impedes Operation of Systems Required to Maintain Safe Operations or to Establish or Maintain Cold Shutdown

Operating Mode Applicability: All

Threshold Values: (1 **OR** 2)

1. VALID radiation monitor readings greater than 15 mR/hr in areas requiring continuous occupancy to maintain plant safety functions:

Control Room radiation monitor	RE-1A

2. UNPLANNED VALID radiation readings greater than 1000 mR/hr (1 R/hr) values in the following areas requiring infrequent access to maintain plant safety functions.

RadioChemistry Lab Area RE-3	Electrical And Piping Penetration Rooms
Charging Pump Room Area RE-4	VCT Valve Room
Sample Room Area RE-6	Seal Water HX Room
Lower Equipment Room	CCW HX Room
Main Steam Valve Room	Turbine Building Air Compressor Area
4160 Volt ESF Bus Rooms	DC Switchgear Rooms
Control Rod Drive Room	Valve Box 1, 2, 3 and 4
Diesel Building	Service Water Intake Structure
Hot shutdown Panels	

Basis:

UNPLANNED: a parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

VALID: an indication, report, or condition, is considered to be VALID when it is verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment.

This IC addresses raised radiation levels that impede necessary access to operating stations, or other areas containing equipment that must be operated manually or that requires local

monitoring, in order to maintain safe operation or perform a safe shutdown. It is this impaired ability to operate the plant that results in the actual or potential substantial degradation of the level of safety of the plant. The cause and/or magnitude of the rise in radiation levels is not a concern of this IC. The Emergency Director must consider the source or cause of the raised radiation levels and determine if any other IC may be involved.

This IC is not meant to apply to anticipated temporary rises due to planned events.

The area requiring continuous occupancy is the control room and the central alarm station. The Central Alarm Station is in the Control Room envelope. The value of 15mR/hr is derived from the GDC 19 value of 5 rem in 30 days with adjustment for expected occupancy times.

For areas requiring infrequent access, the 1000 mR/hr (1 R/hr) (Locked High Rad Area) is based on radiation levels which result in exposure control measures intended to maintain doses within normal occupational exposure guidelines and limits (i.e., 10 CFR 20), and in doing so, will impede necessary access. As used here, *impede,* includes hindering or interfering provided that the interference or delay is sufficient to significantly threaten the safe operation of the plant.

RU1

Initiating Condition

Any UNPLANNED Release of Gaseous or Liquid Radioactivity to the Environment that Exceeds Two Times the Radiological Effluent Technical Specifications for 60 Minutes or Longer.

Operating Mode Applicability: All

Threshold Values: (1 **OR** 2 **OR** 3)

NOTE: The Emergency Director should not wait until 60 minutes has elapsed, but should declare the event as soon as it is determined that the release duration has or will likely exceed 60 minutes.

1. VALID reading on any effluent monitor that exceeds two times the alarm setpoint established by a current radioactivity discharge permit for 60 minutes **OR** longer.

Monitor	2 X Setpoint Value
Liquid Radwaste Effluent Line RE-18	2 x release permit setpoint (planned release) 1.6×10^4 cpm (no planned release)
Steam Generator Blowdown Effluent Line RE-23B	2.80×10^3 cpm
Steam Jet Air Ejector RE-15	3.54×10^2cpm
Plant Vent Gas RE-14 RE-22 RE-29B (NG)	2 x release permit setpoint (planned release) 3.2×10^4 cpm (no planned release) 4.0×10^2 cpm 8.9×10^{-4} µCi/cc

2. VALID reading on any of the following radiation monitors that exceeds the reading shown for 60 minutes **OR** longer:

Main Steam Atmos Relief R60A,B,C	1.4×10^{-1} R/hr
TDAFW Exhaust R60D	1.4×10^{-1} R/hr

3. Confirmed sample analyses for gaseous **OR** liquid releases indicates concentrations **OR** release rates, with a release duration of 60 minutes **OR** longer, in excess of two times Technical Specification 5.5.4.b, as confirmed by the ODCM.

Basis:

UNPLANNED, as used in this context, includes any release for which a radioactivity discharge permit was not prepared, or a release that exceeds the conditions (e.g., minimum dilution flow, maximum discharge flow, alarm setpoints, etc.) on the applicable permit. The Emergency Director should not wait until 60 minutes has elapsed, but should declare the event as soon as it is determined that the release duration has or will likely exceed 60 minutes. Also, if an ongoing release is detected and the starting time for that release is unknown, the Emergency Director should, in the absence of data to the contrary, assume that the release has exceeded 60 minutes.

VALID: an indication, report, or condition, is considered to be VALID when it is verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment.

This IC addresses a potential or actual decline in the level of safety of the plant as indicated by a radiological release that exceeds regulatory commitments for an extended period of time. Nuclear power plants incorporate features intended to control the release of radioactive effluents to the environment. Further, there are administrative controls established to prevent unintentional releases, or control and monitor intentional releases. These controls are located in the Offsite Dose Calculation Manual (ODCM), Ref 2. The occurrence of extended, uncontrolled radioactive releases to the environment is indicative of a degradation in these features and/or controls.

Threshold Value #1 addresses radioactivity releases, that for whatever reason, cause effluent radiation monitor readings to exceed two times the Technical Specification limit and releases are not terminated within 60 minutes. This alarm setpoint may be associated with a planned batch release, or a continuous release path. In either case, the setpoint is established by the ODCM to warn of a release that is not in compliance with the TS 5.5.4. Indexing the Threshold Value to the ODCM setpoints in this manner ensures that the Threshold Value will never be less than the setpoint established by a specific discharge permit.

Threshold Value #2 is intended for effluent monitoring on non-routine release pathways for which a discharge permit would not normally be prepared. The ODCM establishes a methodology for determining effluent radiation monitor setpoints. The ODCM specifies default source terms and, for gaseous releases, prescribes the use of pre-determined annual average meteorology in the most limiting downwind sector for showing compliance with the regulatory commitments. These monitor reading Threshold Values are determined using this methodology.

Threshold Value #3 addresses uncontrolled releases that are detected by sample analyses, particularly on unmonitored pathways, e.g., spills of radioactive liquids into storm drains, heat exchanger leakage in river water systems, etc.

¶RU2

Initiating Condition

Unexpected Rise in Plant Radiation.

Operating Mode Applicability: All

Threshold Values: (1.a **AND** b. **OR** 2)

1. a. VALID indication of uncontrolled water level lowering in the reactor refueling cavity, spent fuel pool, **OR** fuel transfer canal with all irradiated fuel assemblies remaining covered by water.

Personnel report of low water level
Annunciator EH2 “SFP LVL HI/LO”
Personnel report of cavitation **OR** low discharge pressure for SFP Pump Discharge Pressure **AND/OR** RHR Pump Discharge Pressure

AND

b. UNPLANNED VALID Direct Area Radiation Monitor readings rise on any of the following:

RE-0005 in the fuel building
RE-0002 in containment
RE-0027A **OR** B in containment

2. UNPLANNED VALID Direct Area Radiation Monitor readings rise by a factor of 1000 over normal* levels.

*Normal levels can be considered as the highest reading in the past twenty-four hours excluding the current peak value.

Basis:

UNPLANNED: a parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

VALID: an indication, report, or condition, is considered to be VALID when it is verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel, such that doubt related to the indicator’s operability, the condition’s existence, or the report’s accuracy is removed. Implicit in this definition is the need for timely assessment.

This IC addresses raised radiation levels as a result of water level lowering above the RPV flange or events that have resulted, or may result, in unexpected rises in radiation dose rates within plant buildings. These radiation rises represent a loss of control over radioactive material and may represent a potential degradation in the level of safety of the plant.

Classification as a NOUE is warranted as a precursor to a more serious event. Indications include instrumentation such as water level and local area radiation monitors, equipment parameters and personnel (e.g., refueling crew) reports. If available, video cameras may allow remote observation. Depending on available level instrumentation, the declaration threshold may need to be based on indications of water makeup rate or lowering in refueling water storage tank level.

Threshold Value 1a: Personnel report of low water level is the primary indicator.

Threshold Value 1b limits:
FSAR 9.1.3.1.2 indicates that 12 feet of water above the stored fuel yields a dose rate of about 2.5 mR/hr. These monitors do not directly see the fuel, but see the dose reflected from the ceiling or containment dome, A conservative reduction on reflection is 10^{-2} (Ref. 10). Thus when on-scale, the lowest reading monitor (RE-0005, 10^4 mR/hr, Ref. 8, Table 3.3-6) equivalent reading at the pool surface would be 10^6 mR/hr. Then a rise from a general area dose rate of 2.5 mR/hr represents log (10^6/2.5) = 5.6 1/10^{th} thicknesses. Assuming a 1/10^{th} thickness is 2 feet (Ref. 11), the monitor reading rise is equivalent to a water level lowering of 5.6 x 2 = 11.2 feet. Thus the fuel would have at least 6 inches of water cover.

Threshold Value #2 addresses UNPLANNED VALID Direct Area Radiation Monitor readings indicating rises in in-plant radiation levels that represent a degradation in the control of radioactive material, and represent a potential degradation in the level of safety of the plant. “Direct Radiation Area Monitors” include installed Area Radiation Monitors (ARMs) but does not include effluent monitors (which are addressed in separate EALs) or process monitors.

Fission Product Barrier Degradation

NOUE		ALERT		SITE AREA EMERGENCY		GENERAL EMERGENCY	
FU1	ANY Loss or ANY Potential Loss of Containment *Op. Modes: Power Operation, Hot Standby, Startup, Hot Shutdown*	**FA1**	ANY Loss or ANY Potential Loss of **EITHER** Fuel Clad **OR** RCS *Op. Modes: Power Operation, Hot Standby, Startup, Hot Shutdown*	**FS1**	Loss or Potential Loss of ANY Two Barriers *Op. Modes: Power Operation, Hot Standby, Startup, Hot Shutdown*	**FG1**	Loss of ANY Two Barriers **AND** Loss or Potential Loss of Third Barrier *Op. Modes: Power Operation, Hot Standby, Startup, Hot Shutdown*

NOTES

1. The logic used for these initiating conditions reflects the following considerations:

   - The Fuel Clad Barrier and the RCS Barrier are weighted more heavily than the Containment Barrier. NOUE ICs associated with RCS and Fuel Clad Barriers are addressed under System Malfunction ICs.

   - At the Site Area Emergency level, there must be some ability to dynamically assess how far present conditions are from the threshold for a General Emergency. For example, if Fuel Clad and RCS Barrier "Loss" Threshold Values existed, that, in addition to offsite dose assessments, would require continual assessments of radioactive inventory and containment integrity. Alternatively, if both Fuel Clad and RCS Barrier "Potential Loss" Threshold Values existed, the Emergency Director would have more assurance that there was no immediate need to escalate to a General Emergency.

   - The ability to escalate to higher emergency classes as an event deteriorates must be maintained. For example, RCS leakage steadily increasing would represent an increasing risk to public health and safety.

Farley Fission Product Barrier Evaluation

FUEL CLAD BARRIER Threshold Values:

The Fuel Clad Barrier is the zircalloy or stainless steel tubes that contain the fuel pellets.

1. Critical Safety Function Status

NOTE: Heat Sink CSF should not be considered –RED if total AFW flow is less than 395 gpm due to operator action.

RED path indicates an extreme challenge to the safety function. ORANGE path indicates a severe challenge to the safety function.

Core Cooling - ORANGE indicates subcooling has been lost and that some clad damage may occur. Heat Sink - RED indicates the ultimate heat sink function is under extreme challenge and thus these two items indicate potential loss of the Fuel Clad Barrier.

Core Cooling - RED indicates significant superheating and core uncovery and is considered to indicate loss of the Fuel Clad Barrier.

2. Primary Coolant Activity Level

The 300 μCi/gm I_{131} equivalent. Assessment by the NUMARC EAL Task Force indicates that this amount of coolant activity is well above that expected for iodine spikes and corresponds to less than 5% fuel clad damage. This amount of radioactivity indicates significant clad damage and thus the Fuel Clad Barrier is considered lost.

There is no equivalent "Potential Loss" Threshold Value for this item.

3. Core Exit Thermocouple Readings

Core Exit Thermocouple Readings are included in addition to the Critical Safety Functions to include conditions when the CSFs may not be in use.

The "Loss" Threshold Value of 1200 degrees F corresponds to significant superheating of the coolant. This value corresponds to the temperature reading that indicates core cooling - RED in Fuel Clad Barrier Threshold Value #1.

The "Potential Loss" Threshold Value of 700 degrees F corresponds to loss of subcooling. This value corresponds to the temperature reading that indicates core cooling - ORANGE in Fuel Clad Barrier Threshold Value #1.

4. Reactor Vessel Water Level

There is no "Loss" Threshold Value corresponding to this item because it is better covered by the other Fuel Clad Barrier "Loss" Threshold Values.
The 0% RVLIS value for the "Potential Loss" Threshold Value corresponds to the top of the active fuel. The "Potential Loss" Threshold Value is defined by the Core Cooling - ORANGE path.

5. Containment Radiation Monitoring

The greater than 600 R/hr reading is a value which indicates the release of reactor coolant, with elevated activity indicative of fuel damage, into the containment. The reading is calculated assuming the instantaneous release and dispersal of the reactor coolant noble gas and iodine inventory associated with a concentration of 300 μCi/gm dose equivalent I-131 into the containment atmosphere. Reactor coolant concentrations of this magnitude are several times larger than the maximum concentrations (including iodine spiking) allowed within technical specifications and are therefore indicative of fuel damage. This value is higher than that specified for RCS barrier Loss Threshold Value #4. Thus, this Threshold Value indicates a loss of both the fuel clad barrier and a loss of RCS barrier.

There is no "Potential Loss" Threshold Value associated with this item.

7. Emergency Director Judgment

This Threshold Value addresses any other factors that are to be used by the Emergency Director in determining whether the Fuel Clad barrier is lost or potentially lost. In addition, the inability to monitor the barrier is incorporated in this Threshold Value as a factor in Emergency Director judgment that the barrier may be considered lost or potentially lost.

RCS BARRIER Threshold Values:

The RCS Barrier includes the RCS primary side and its connections up to and including the pressurizer safety and relief valves, and other connections up to and including the primary isolation valves.

1. Critical Safety Function Status

There is no "Loss" Threshold Value associated with this item.

NOTE:	**Heat Sink CSF should not be considered –RED if total AFW flow is less than 395 gpm due to operator action.**

This Threshold Value uses the Critical Safety Function Status Tree (CSFST) monitoring and functional restoration procedures. An RCS Integrity RED path indicates an extreme challenge to the safety function derived from appropriate instrument readings, and these CSFs indicate a potential loss of RCS barrier.

2. RCS Leak Rate

The "Loss" Threshold Value addresses conditions where leakage from the RCS is greater than available inventory control capacity such that a loss of subcooling has occurred. The loss of subcooling is the fundamental indication that the inventory control systems are inadequate in maintaining RCS pressure and inventory against the mass loss through the leak.

The "Potential Loss" Threshold Value is based on the inability to maintain normal liquid inventory within the Reactor Coolant System (RCS) by normal operation of the Chemical and Volume Control System which is considered as one centrifugal charging pump discharging to

the charging header. A second charging pump being required is indicative of a substantial RCS leak providing the 120 GPM value.

3. SG Tube Rupture

This Threshold Value is intended to address the full spectrum of Steam Generator (SG) tube rupture events in conjunction with Containment Barrier "Loss" Threshold Value #4 and Fuel Clad Barrier Threshold Values. The "Loss" Threshold Value addresses RUPTURED SG(s) for which the leakage is large enough to cause actuation of ECCS (SI). This is consistent to the RCS Barrier “Potential Loss” Threshold Value #2. This condition is described by EEP-3.0 entered. By itself, this Threshold Value will result in the declaration of an Alert. However, if the SG is also FAULTED (i.e., two barriers failed), the declaration escalates to a Site Area Emergency per Containment Barrier "Loss" Threshold Value #4.

There is no "Potential Loss" Threshold Value.

4. Containment Radiation Monitoring

The RE-2 greater than 1.0 R/hr and RE-7 greater than 500 mR/hr threshold is a value which indicates the release of reactor coolant to the containment. The reading is calculated assuming the instantaneous release and dispersal of the reactor coolant noble gas and iodine inventory associated with normal operating concentrations (i.e., within T/S) into the containment atmosphere. This value is less than that specified for Fuel Clad Barrier Threshold Value #5. Thus, this Threshold Value would be indicative of a RCS leak only. If the radiation monitor reading rise to that specified by Fuel Clad Barrier Threshold Value #5, fuel damage would also be indicated.

There is no "Potential Loss" Threshold Value associated with this item.

5. Other Indications

There is no "Loss" Threshold Value associated with this item.

An unexplained level rise in the containment sump, Reactor Coolant Drain Tank or the Waste Holdup Tank could indicate a RCS leak and is therefore included as a Potential Loss of the RCS Barrier. Rises in the containment sump levels, Reactor Coolant Drain Tank, or the Waste Holdup Tank that are anticipated as part of a planned evolution (or have already been identified by other leak assessment measures and accounted for in other threshold values) do not meet this threshold. Likewise, rises in containment sump levels, Reactor Coolant Drain Tank, or the Waste Holdup Tank that can be readily attributed to a source other than the RCS would also *not* meet the threshold. Sump and tank level increases must be evaluated against other potential sources of leakage such as cooling water sources inside the containment to ensure they are indicative of RCS leakage.

6. Emergency Director Judgment

This Threshold Value addresses any other factors that are to be used by the Emergency Director in determining whether the RCS barrier is lost or potentially lost. In addition, the inability to monitor the barrier should also be incorporated in this Threshold Value as a factor in Emergency Director judgment that the barrier may be considered lost or potentially lost.

CONTAINMENT BARRIER Threshold Values:

The Containment Barrier includes the containment building, its connections up to and including the outermost containment isolation valves. This barrier also includes the main steam, feedwater, and blowdown line extensions outside the containment building up to and including the outermost secondary side isolation valve.

1. Critical Safety Function Status

There is no "Loss" Threshold Value associated with this item.

This Threshold Value uses Critical Safety Function Status Tree (CSFST) monitoring and functional restoration procedures. Containment RED path indicates an extreme challenge to the safety function derived from appropriate instrument readings and/or sampling results, and thus represents a potential loss of containment. Conditions leading to a containment RED path result from RCS barrier and/or Fuel Clad Barrier Loss. Thus, this Threshold Value is primarily a discriminator between Site Area Emergency and General Emergency representing a potential loss of the third barrier.

2. Containment Pressure

Rapid unexplained loss of pressure (i.e., not attributable to containment spray or condensation effects) following an initial pressure rise indicates a loss of containment integrity. Containment pressure and sump levels should rise as a result of the mass and energy release into containment from a LOCA. Thus, sump level or pressure not increasing indicates containment bypass and a loss of containment integrity.

The 54 PSIG for potential loss of containment is based on the containment design pressure. Existence of an explosive mixture means a hydrogen and oxygen concentration of at least the lower deflagration limit (greater than 6%) curve exists. The indications of potential loss under this Threshold Value corresponds to some of those leading to the RED path in Threshold Value #1 above and may be declared. As described above, this Threshold Value is primarily a discriminator between Site Area Emergency and General Emergency representing a potential loss of the third barrier.

The CTMT CSF ORANGE condition represents a potential loss of containment in that the containment heat removal/depressurization system (e.g., containment sprays, fan coolers, etc., but not including containment venting strategies) are either lost or performing in a degraded manner, as indicated by containment pressure greater than the setpoint at which the equipment was supposed to have actuated.

3. Core Exit Thermocouples

There is no "Loss" Threshold Value associated with this item.

In this Threshold Value, the function restoration procedures are those emergency operating procedures that address the recovery of the core cooling critical safety functions. The procedure is considered effective if the temperature is decreasing or if the vessel water level is increasing. For units using the CSF status trees a direct correlation to those status trees can be made if the effectiveness of the restoration procedures is also evaluated as stated below.

Severe accident analyses (e.g., NUREG-1150) have concluded that function restoration procedures can arrest core degradation within the reactor vessel in a significant fraction of the core damage scenarios, and that the likelihood of containment failure is very small in these events. Given this, it is appropriate to provide a reasonable period to allow function restoration procedures to arrest the core melt sequence. Whether or not the procedures will be effective should be apparent within 15 minutes. The Emergency Director should make the declaration as

soon as it is determined that the procedures have been, or will be ineffective. The reactor vessel level chosen should be consistent with the emergency response guides applicable to the facility.

The conditions in this potential loss Threshold Value represent an imminent core melt sequence which, if not corrected, could lead to vessel failure and an raised potential for containment failure. In conjunction with the Core Cooling and Heat Sink criteria in the Fuel and RCS barrier columns, this Threshold Value would result in the declaration of a General Emergency -- loss of two barriers and the potential loss of a third. If the function restoration procedures are ineffective, there is no "success" path.

4. SG Secondary Side Release With Primary To Secondary Leakage

This “loss” Threshold Value recognizes that SG tube leakage can represent a bypass of the containment barrier as well as a loss of the RCS barrier. The “loss” Threshold Value addresses the condition in which a RUPTURED steam generator is also FAULTED. This condition represents a bypass of the RCS and containment barriers. In conjunction with RCS Barrier “loss” Threshold Value #3, this would always result in the declaration of a Site Area Emergency.

The other leakage “loss” Threshold Value addresses SG tube leaks that exceed 10 gpm in conjunction with a nonisolable release path to the environment from the affected steam generator. The threshold for establishing the nonisolable secondary side release is intended to be a prolonged release of radioactivity from the RUPTURED steam generator directly to the environment. This could be expected to occur when the main condenser is unavailable to accept the contaminated steam (i.e., SGTR with concurrent loss of offsite power and the RUPTURED steam generator is required for plant cooldown or a stuck open relief valve). If the main condenser is available, there may be releases via air ejectors, gland seal exhausters, and other similar controlled, and often monitored, pathways. These pathways do not meet the intent of a nonisolable release path to the environment. These minor releases are assessed using Abnormal Rad Levels / Radiological Effluent ICs.

5. Containment Isolation Valve Status After Containment Isolation

This Threshold Value addresses incomplete containment isolation that allows direct release to the environment. It represents a loss of the containment barrier.

The use of the modifier “direct” in defining the release path discriminates against release paths through interfacing liquid systems. The existence of an in–line charcoal filter does not make a release path indirect since the filter is not effective at removing fission noble gases. Typical filters have an efficiency of 95-99% removal of iodine. Given the magnitude of the core inventory of iodine, significant releases could still occur. In addition, since the fission product release would be driven by boiling in the reactor vessel, the high humidity in the release stream can be expected to render the filters ineffective in a short period.

There is no "Potential Loss" Threshold Value associated with this item.

6. Significant Radioactive Inventory in Containment

There is no "Loss" Threshold Value associated with this item.

The greater than 8000 R/hr value indicates significant fuel damage well in excess of the Threshold Values associated with both loss of Fuel Clad and loss of RCS Barriers. A major

release of radioactivity requiring offsite protective actions from core damage is not possible unless a major failure of fuel cladding allows radioactive material to be released from the core into the reactor coolant.

Regardless of whether containment is challenged, this amount of activity in containment, if released, could have such severe consequences that it is prudent to treat this as a potential loss of containment, such that a General Emergency declaration is warranted. NUREG-1228, "Source Estimations During Incident Response to Severe Nuclear Power Plant Accidents," indicates that such conditions do not exist when the amount of clad damage is less than 20%. A radiation monitor reading corresponding to 20% fuel clad damage is specified here.

7. Other Indications

Leakage from the Containment would be routed through various ventilation systems where the specific monitors would indicate a release. R10, R14, R21, **OR** R22 Alarms would indicate a breach in containment.

8. Emergency Director Judgment

This Threshold Value addresses any other factors that are to be used by the Emergency Director in determining whether the Containment barrier is lost or potentially lost. In addition, the inability to monitor the barrier should also be incorporated in this Threshold Value as a factor in Emergency Director judgment that the barrier may be considered lost or potentially lost.

SG1

Initiating Condition

Prolonged Loss of All Offsite Power **AND** Prolonged Loss of All Onsite AC Power to Essential Busses.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)
Hot Standby (Mode 3)
Hot Shutdown (Mode 4)

Threshold Value: **(**1 **AND EITHER** 2 **OR** 3)

1. Loss of ALL AC power indicated by:

   a. Loss of offsite power to **OR** from Start Up Transformers 1(2)A **AND** 1(2)B resulting in loss of all offsite electrical power to **BOTH** 4160V ESF busses 1(2)F **AND** 1(2)G for greater than 15 minutes

   AND

   b. Failure of emergency diesel generators to supply power to emergency busses.

   AND EITHER

2. Restoration of at least one 4160V ESF bus, 1(2)F **OR** 1(2)G, within 4 hr. of time of loss is **NOT** likely

   OR

3. Fuel Clad Barrier Evaluation indicates continuing degradation (Loss or Potential Loss) due to core cooling.

Basis:

Loss of all AC power compromises all plant safety systems requiring electric power including RHR, ECCS, Containment Heat Removal and the Ultimate Heat Sink. Prolonged loss of all AC power will lead to loss of fuel clad, RCS, and containment. The 4 hours to restore AC power is based on a site blackout coping analysis. Appropriate allowance for offsite emergency response including evacuation of surrounding areas should be considered. Although this IC may be viewed as redundant to the Fission Product Barrier Degradation IC, its inclusion is necessary to better assure timely recognition and emergency response.

This IC is specified to assure that in the unlikely event of a prolonged station blackout, timely recognition of the seriousness of the event occurs and that declaration of a General Emergency occurs as early as is appropriate, based on a reasonable assessment of the event trajectory.

The likelihood of restoring at least one emergency bus should be based on a realistic appraisal of the situation since a delay in an upgrade decision based on only a chance of mitigating the event could result in a loss of valuable time in preparing and implementing public protective actions.

In addition, under these conditions, fission product barrier monitoring capability may be degraded. Although it may be difficult to predict when power can be restored, it is necessary to give the Emergency Director a reasonable idea of how quickly (s)he may need to declare a General Emergency based on two major considerations:

1. Are there any present indications that core cooling is already degraded to the point that Loss or Potential Loss of Fission Product Barriers is imminent?

2. If there are no present indications of such core cooling degradation, how likely is it that power can be restored in time to assure that a loss of two barriers with a potential loss of the third barrier can be prevented?

Thus, indication of continuing core cooling degradation must be based on Fission Product Barrier monitoring with particular emphasis on Emergency Director judgment as it relates to imminent Loss or Potential Loss of fission product barriers and degraded ability to monitor fission product barriers.

¶SG2

Initiating Condition

Failure of the Reactor Protection System to Complete an Automatic Trip **AND** Manual Trip was NOT Successful **AND** there is Indication of an Extreme Challenge to the Ability to Cool the Core.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)

Threshold Value: (1 **AND EITHER** a **OR** b)

NOTE:	**A successful manual trip for purposes of declaration is any action taken from the MCB that rapidly inserts the control rods. This can be accomplished by tripping the reactor using the Reactor Trip switches on the MCB OR by de-energizing both Rod Drive Motor Generator sets from the MCB.**

NOTE:	**Heat Sink CSF should not be considered RED if total AFW flow is less than 395 gpm due to operator action.**

NOTE	**Failure of both MCB Rx Trip switches to trip the reactor meets the TV criteria of a setpoint being exceeded with no automatic trip occurring.**

1. Indications exist that a reactor protection system setpoint was exceeded and automatic trip did not occur, and a manual trip did not result in the reactor being made subcritical.

   AND EITHER

   a. Core Cooling CSF - RED

   OR

   b. Heat Sink CSF - RED

Basis:

Automatic and manual trip are not considered successful if action away from the reactor control console is required to trip the reactor. Under the conditions of this IC and its associated Threshold Values, the efforts to bring the reactor subcritical have been unsuccessful and, as a result, the reactor is producing more heat than the maximum decay heat load for which the safety systems were designed. Although there are capabilities away from the reactor control console, such as emergency boration, the continuing temperature rise indicates that these capabilities are not effective. This situation could be a precursor for a core melt sequence. This Threshold Value equates to a Subcriticality RED condition.

The extreme challenge to the ability to cool the core is intended to mean that the core exit temperatures are at or approaching 1200 degrees F or that the reactor vessel water level is below the top of active fuel. This Threshold Value equates to a Core Cooling RED condition.

Another consideration is the inability to initially remove heat during the early stages of this sequence. If emergency feedwater flow is insufficient to remove the amount of heat required by design from at least one steam generator, an extreme challenge should be considered to exist. This Threshold Value equates to a Heat Sink RED condition.

In the event either of these challenges exist at a time that the reactor has not been brought below the power associated with the safety system design (typically 3 to 5% power) a core melt sequence exists. In this situation, core degradation can occur rapidly. For this reason, the General Emergency declaration is intended to be anticipatory of the fission product barrier matrix declaration to permit maximum offsite intervention time.

¶SS1

Initiating Condition

Loss of All Offsite Power **AND** Loss of All Onsite AC Power to Essential Busses.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)
Hot Standby (Mode 3)
Hot Shutdown (Mode 4)

Threshold Value: (1a **AND** 1b **AND** 1c)

1. Loss of all AC power indicated by:
   a. Loss of offsite power to **OR** from Start Up Transformers 1(2)A **AND** 1(2)B resulting in loss of all offsite electrical power to **BOTH** 4160V ESF busses 1(2)F **AND** 1(2)G for greater than 15 minutes

      AND
   b. Failure of emergency diesel generators to supply power to emergency busses.

      AND
   c. Restoration of at least one 4160V ESF bus, F **OR** G, has **NOT** occurred within 15 minutes of time of loss of all AC power

Basis:

Loss of all AC power compromises all plant safety systems requiring electric power including RHR, ECCS, Containment Heat Removal and the Ultimate Heat Sink. Prolonged loss of all AC power will cause core uncovering and loss of containment integrity, thus this event can escalate to a General Emergency. The 15 minute time duration is selected to exclude transient or momentary power losses.

Consideration should be given to operable loads necessary to remove decay heat or provide Reactor Vessel makeup capability when evaluating loss of AC power to essential busses. Even though an essential bus may be energized, if necessary loads are not operable on the energized bus then the bus should not be considered operable.

Initiating Condition

Failure of Reactor Protection System Instrumentation to Complete or Initiate an Automatic Reactor Trip Once a Reactor Protection System Setpoint Has Been Exceeded **AND** Manual Trip Was NOT Successful.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)

Threshold Value: (1)

NOTE:	**A successful manual trip for purposes of declaration is any action taken from the MCB that rapidly inserts the control rods. This can be accomplished by tripping the reactor using the Reactor Trip switches on the MCB OR by de-energizing both Rod Drive Motor Generator sets from the MCB.**

NOTE	**Failure of both MCB Rx Trip switches to trip the reactor meets the TV criteria of a setpoint being exceeded with no automatic trip occurring.**

1. Indications exist that a reactor protection system setpoint was exceeded and automatic trip did not occur, and a manual trip did not result in the reactor being made subcritical. (NOTE)

Basis:

Automatic and manual trip are not considered successful if action away from the reactor control console was required to trip the reactor.

The Reactor should be considered subcritical when reactor power level has been reduced to less than 5% power and SUR is negative.

Under these continued power generation conditions, the reactor may be producing more heat than the maximum decay heat load for which the safety systems are designed. A Site Area Emergency is indicated because conditions exist that may lead to imminent loss or potential loss of both fuel clad and RCS. Although this IC may be viewed as redundant to the Fission Product Barrier Degradation IC, its inclusion is necessary to better assure timely recognition and emergency response. Escalation of this event to a General Emergency would be via Fission Product Barrier Degradation or Emergency Director Judgment ICs. A manual reactor trip is considered to be a trip input to the automatic Reactor Protection System.

¶SS3

Initiating Condition

Loss of All Vital DC Power.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)
Hot Standby (Mode 3)
Hot Shutdown (Mode 4)

Threshold Value: (1)

1. Loss of all Vital DC power to 125 VDC Bus A **AND** B indicated by bus voltage indications less than 105 VDC for greater than 15 minutes.

Basis:

Loss of all DC power compromises ability to monitor and control plant safety functions. Prolonged loss of all DC power will cause core uncovering and loss of containment integrity when there is significant decay heat and sensible heat in the reactor system.

105 VDC bus voltage is based on the minimum bus voltage necessary for the operation of safety related equipment. This voltage value incorporates a margin of at least 15 minutes of operation before the onset of inability to operate those loads.

¶SS4

Initiating Condition

Complete Loss of Heat Removal Capability.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)
Hot Standby (Mode 3)
Hot Shutdown (Mode 4)

Threshold Value: (1a **AND** 1b)

NOTE: Heat Sink CSF should not be considered –RED if total AFW flow is less than 395 gpm due to operator action.

1. Complete Loss of Heat Removal Capability as indicated by:

   a. Core Cooling CSF - ORANGE

   AND

   b. Heat Sink CSF - RED

Basis:

This Threshold Value addresses complete loss of functions, including ultimate heat sink (NSCW), required for hot shutdown with the reactor at pressure and temperature. Reactivity control is addressed in other Threshold Values.

Under these conditions, there is an actual major failure of a system intended for protection of the public. Thus, declaration of a Site Area Emergency is warranted.

¶SS6

Initiating Condition

Inability to Monitor a SIGNIFICANT TRANSIENT in Progress.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)
Hot Standby (Mode 3)
Hot Shutdown (Mode 4)

Threshold Value: (1a **AND** 1b **AND** 1c **AND** 1d)

1. a. A SIGNIFICANT TRANSIENT in progress

   AND

   b. Loss of most **OR** all (approximately 75% of the MCB) annunciators **OR** indicators associated with safety systems

   AND

   c. Compensatory non-alarming indications are **NOT** available

   AND

   d. Indications needed to monitor the Critical Safety Function Status Tree parameters are **NOT** available

Basis:

SIGNIFICANT TRANSIENT: is an UNPLANNED event involving one or more of the following: (1) automatic turbine runback greater than 25% thermal reactor power, (2) electrical load rejection greater than 25% full electrical load, (3) Reactor Trip, (4) Safety Injection Activation, or (5) thermal power oscillations greater than 10%.

This IC and its associated Threshold Value are intended to recognize the inability of the control room staff to monitor the plant response to a transient. A Site Area Emergency is considered to exist if the control room staff cannot monitor safety functions needed for protection of the public.

The annunciators for this Threshold Value are limited to include those identified in the Abnormal Operating Procedures, in the Emergency Operating Procedures, and in other Threshold Values.

"Compensatory non-alarming indications" in this context includes computer based information such as SPDS.

The indications needed to monitor safety functions necessary for protection of the public must include control room indications, computer generated indications and dedicated annunciation

capability. The specific indications are those used to determine such functions as the ability to shut down the reactor, maintain the core cooled, to maintain the reactor coolant system intact, and to maintain containment intact.

"Planned" and “UNPLANNED” actions are not differentiated since the loss of instrumentation of this magnitude is of such significance during a transient that the cause of the loss is not an ameliorating factor.

Quantification of "Most" is arbitrary, however, it is estimated that if approximately 75% of the safety system annunciators or indicators are lost, there is a greater risk that a degraded plant condition could go undetected. It is not intended that plant personnel perform a detailed count of the instrumentation lost but use the value as a judgment threshold for determining the severity of the plant conditions. It is also not intended that the Shift Supervisor be tasked with making a judgment decision as to whether additional personnel are required to provide augmented monitoring of system operation.

¶SA2

Initiating Condition

Failure of Reactor Protection System Instrumentation to Complete or Initiate an Automatic Reactor Trip Once a Reactor Protection System Setpoint Has Been Exceeded **AND** Manual Trip Was Successful.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)
Hot Standby (Mode 3)

Threshold Value: (1)

NOTE:	**A successful manual trip for purposes of declaration is any action taken from the MCB that rapidly inserts the control rods. This can be accomplished by tripping the reactor using the Reactor Trip switches on the MCB OR by de-energizing both Rod Drive Motor Generator sets from the MCB.**

NOTE	**Failure of both MCB Rx Trip switches to trip the reactor meets the TV criteria of a setpoint being exceeded with no automatic trip occurring.**

1. Indication(s) exist that a reactor protection setpoint was exceeded and an automatic trip did not occur, and a manual trip resulted in the reactor being subcritical.

Basis:

This condition indicates failure of the automatic protection system to trip the reactor. This condition is more than a potential degradation of a safety system in that a front line automatic protection system did not function in response to a plant transient and thus the plant safety has been compromised, and design limits of the fuel may have been exceeded. An Alert is indicated because conditions exist that lead to potential loss of fuel clad or RCS. Reactor protection system setpoint being exceeded, rather than limiting safety system setpoint being exceeded, is specified here because failure of the automatic protection system is the issue. A manual reactor trip is considered to be a trip input to the automatic Reactor Protection System or de-energizing the MG sets should initiate a manual trip.

The Reactor should be considered subcritical when reactor power level has been reduced to less than 5% power and SUR is negative.

¶SA4

Initiating Condition

UNPLANNED Loss of Most or All Safety System Annunciation or Indication in the Control Room With **EITHER** (1) a SIGNIFICANT TRANSIENT in Progress, **OR** (2) Compensatory Non-Alarming Indicators are Unavailable.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)
Hot Standby (Mode 3)
Hot Shutdown (Mode 4)

Threshold Value: (1 **AND EITHER** a **OR** b)

1. UNPLANNED loss of most **OR** all (approximately 75% of the MCB) annunciators **OR** indicators associated with safety systems for greater than 15 minutes

   AND EITHER

   a. A SIGNIFICANT TRANSIENT is in progress

   OR

   b. Compensatory non-alarming indications are **NOT** available

Basis:

UNPLANNED: a parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

SIGNIFICANT TRANSIENT: is an UNPLANNED event involving one or more of the following: (1) automatic turbine runback greater than 25% thermal reactor power, (2) electrical load rejection greater than 25% full electrical load, (3) Reactor Trip, (4) Safety Injection Activation, or (5) thermal power oscillations greater than 10%.

This IC and its associated Threshold Values are intended to recognize the difficulty associated with monitoring changing plant conditions without the use of a major portion of the annunciation or indication equipment during a transient. Recognition of the availability of computer based indication equipment is considered. A "planned" loss of annunciators or indicators includes scheduled maintenance and testing activities.

Quantification of "Most" is arbitrary, however, it is estimated that if approximately 75% of the safety system annunciators or indicators are lost, there is a greater risk that a degraded plant condition could go undetected. It is not intended that plant personnel perform a detailed count of the instrumentation lost but use the value as a judgment threshold for determining the severity of the plant conditions. It is also not intended that the Shift Supervisor be tasked with making a

judgment decision as to whether additional personnel are required to provide augmented monitoring of system operation.

It is further recognized that most plant designs provide redundant safety system indication powered from separate uninterruptible power supplies. While failure of a large portion of annunciators is more likely than a failure of a large portion of indications, the concern is included in this Threshold Value due to difficulty associated with assessment of plant conditions.

The annunciators or indicators for this Threshold Value include those identified in the Abnormal Operating Procedures, in the Emergency Operating Procedures, and in other Threshold Values.

"Compensatory non-alarming indications" in this context includes computer based information such as SPDS. This should include all computer systems available for this use depending on specific plant design and subsequent retrofits. If both a major portion of the annunciation system and all computer monitoring are unavailable, the Alert is required.

¶SA5

Initiating Condition

AC power capability to essential busses reduced to a single power source for greater than 15 minutes such that any additional single failure would result in station blackout.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)
Hot Standby (Mode 3)
Hot Shutdown (Mode 4)

Threshold Value: (1a **AND** 1b)

1. a. AC power capability to 4160V ESF busses 1(2)F **AND** 1(2)G reduced to a single power source for greater than 15 minutes

   AND

   b. ANY additional single failure will result in station blackout.

Basis:

This IC and the associated Threshold Values are intended to provide an escalation from IC SU1, "Loss of All Offsite Power To Essential Busses for Greater Than 15 Minutes." The condition indicated by this IC is the degradation of the offsite and onsite power systems such that any additional single failure would result in a station blackout. This condition could occur due to a loss of offsite power with a concurrent failure of one emergency generator to supply power to its emergency busses. Another related condition could be the loss of all offsite power and loss of onsite emergency diesels with only one train of emergency busses being backfed from the SAT, or the loss of onsite emergency diesels with only one train of emergency busses being backfed from offsite power. The subsequent loss of this single power source would escalate the event to a Site Area Emergency in accordance with IC SS1, "Loss of All Offsite and Loss of All Onsite AC Power to Essential Busses."

The Threshold Values allow credit for operation of installed design features, such as cross-ties or swing diesels, provided that abnormal or emergency operating procedures address their use.

¶SU1

Initiating Condition

Loss of All Offsite Power to Essential Busses for Greater Than 15 Minutes.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)
Hot Standby (Mode 3)
Hot Shutdown (Mode 4)

Threshold Value: (1a **AND** 1b)

1. a. Loss of offsite power to **OR** from Start Up Transformers 1(2)A **AND** 1(2)B resulting in loss of all offsite electrical power to **BOTH** 4160V ESF busses 1(2)F **AND** 1(2)G for greater than 15 minutes

   AND

   b. Emergency diesel generators supplying power to **BOTH** 4160V ESF busses 1(2)F **AND** 1(2)G.

Basis:

Prolonged loss of Offsite AC power reduces required redundancy and potentially degrades the level of safety of the plant by rendering the plant more vulnerable to a complete Loss of AC Power (e.g., Station Blackout). Fifteen minutes was selected as a threshold to exclude transient or momentary power losses.

SU2

Initiating Condition

Inability to Reach Required Shutdown Within Technical Specification Limits.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)
Hot Standby (Mode 3)
Hot Shutdown (Mode 4)

Threshold Value: (1)

1. Plant is **NOT** brought to required operating mode within FNP Technical Specifications LCO Action Statement Time limit.

Basis:

Limiting Conditions of Operation (LCOs) require the plant to be brought to a required shutdown mode when the Technical Specification required configuration cannot be restored. Depending on the circumstances, this may or may not be an emergency or precursor to a more severe condition. In any case, the initiation of plant shutdown required by the site Technical Specifications requires a 4-hour report under 10 CFR 50.72 (b) Non-emergency events. The plant is within its safety envelope when being shut down within the allowable action statement time in the Technical Specifications. An immediate NOUE is required when the plant is not brought to the required operating mode within the allowable action statement time in the Technical Specifications. Declaration of a NOUE is based on the time at which the LCO-specified action statement time period elapses under the site Technical Specifications and is not related to how long a condition may have existed**.** Other required Technical Specification shutdowns that involve precursors to more serious events are addressed by other System Malfunction, Hazards, or Fission Product Barrier Degradation ICs.

¶SU3

Initiating Condition

UNPLANNED Loss of Most or All Safety System Annunciation or Indication in The Control Room for Greater Than 15 Minutes

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)
Hot Standby (Mode 3)
Hot Shutdown (Mode 4)

Threshold Value: (1)

1. UNPLANNED loss of most **OR** all (approximately 75% of the MCB annunciators) **OR** indicators associated with safety systems for greater than 15 minutes.

Basis:

UNPLANNED: a parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

This IC and its associated Threshold Value are intended to recognize the difficulty associated with monitoring changing plant conditions without the use of a major portion of the annunciation or indication equipment.

Recognition of the availability of computer based indication equipment is considered.

Quantification of "Most" is arbitrary, however, it is estimated that if approximately 75% of the safety system annunciators or indicators are lost, there is a greater risk that a degraded plant condition could go undetected. It is not intended that plant personnel perform a detailed count of the instrumentation lost but use the value as a judgment threshold for determining the severity of the plant conditions.

It is further recognized that most plant designs provide redundant safety system indication powered from separate uninterruptible power supplies. While failure of a large portion of annunciators is more likely than a failure of a large portion of indications, the concern is included in this Threshold Value due to difficulty associated with assessment of plant conditions.

The annunciators or indicators for this Threshold Value include those identified in the Abnormal Operating Procedures, in the Emergency Operating Procedures, and in other Threshold Values. Fifteen minutes was selected as a threshold to exclude transient or momentary power losses.

¶SU4

Initiating Condition

Fuel Clad Degradation.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)
Hot Standby (Mode 3)
Hot Shutdown (Mode 4)

Threshold Values: (1)

1. RCS coolant sample activity value indicating fuel clad degradation greater than Technical Specification allowable limits as indicated by ANY of the following:

Dose Equivalent I-131 greater than 0.5 µCi/gm for greater than 48 hours
Dose Equivalent I-131 greater than Technical Specification figure 3.4.16-1. **IF** less than 20% power, **THEN** use the Dose Equivalent I-131 20% power limit on Technical Specification figure 3.4.16-1
RCS gross specific activity greater than 100/Ē µCi/gm.

Basis:

This IC is included as a NOUE because it is considered to be a potential degradation in the level of safety of the plant and a potential precursor of more serious problems.

The Threshold Value addresses coolant samples exceeding coolant technical specifications for iodine spike. Escalation of this IC to the Alert level is via the Fission Product Barrier Degradation Monitoring ICs. Though the referenced Technical Specification limits are mode dependent, it is appropriate that the Threshold Value's be applicable in all modes, as they indicate a potential degradation in the level of safety of the plant.

¶SU5

Initiating Condition

RCS Leakage.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)
Hot Standby (Mode 3)
Hot Shutdown (Mode 4)

Threshold Values: (1 **OR** 2)

1. RCS Unidentified **OR** pressure boundary leakage greater than 10 gpm.

2. RCS Identified leakage greater than 25 gpm.

Basis:

This IC is included as a NOUE because it may be a precursor of more serious conditions and, as result, is considered to be a potential degradation of the level of safety of the plant. The 10 gpm value for the unidentified and pressure boundary leakage was selected as it is observable with normal control room indications. Lesser values must generally be determined through time-consuming surveillance tests (e.g., mass balances). The Threshold Value for identified leakage is set at a higher value due to the lesser significance of identified leakage in comparison to unidentified or pressure boundary leakage.

¶SU6

Initiating Condition

UNPLANNED Loss of All Onsite **OR** Offsite Communications Capabilities.

Operating Mode Applicability: Power Operation (Mode 1)
Startup (Mode 2)
Hot Standby (Mode 3)
Hot Shutdown (Mode 4)

Threshold Values: (1 **OR** 2)

1. UNPLANNED loss of ALL of the following on-site communications capability affecting the ability to perform routine operations:

In plant telephones
Public Address System
Plant radio systems

2. UNPLANNED loss of ALL of the following off-site communications capability:

ENN (Emergency Notification Network)
ENS (Emergency Notification System)
Commercial phones (Radio, PBX, Satellite, Wireless)
VOIP (Voice Over Internet Protocol)
OPX (Off Premise Extension)

Basis:

UNPLANNED: a parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

The purpose of this IC and its associated Threshold Values is to recognize a loss of communications capability that either defeats the plant operations staff ability to perform routine tasks necessary for plant operations or the ability to communicate problems with offsite authorities.

The availability of one method of ordinary offsite communications is sufficient to inform state and local authorities of plant conditions. This Threshold Value is intended to be used only when extraordinary means (e.g., relaying of information from radio transmissions, individuals being sent to offsite locations, etc.) are being used to make communications possible. The list for onsite communications loss encompasses the loss of all means of routine communications. The list for offsite communications loss encompasses the loss of all means of communications with offsite authorities.

¶SU8

Initiating Condition

Inadvertent Criticality.

OPERATING MODE APPLICABILITY Hot Standby (Mode 3)
Hot Shutdown (Mode 4)

Threshold Value: **(1)**

1. An UNPLANNED sustained positive startup rate observed on nuclear instrumentation.

Basis:

UNPLANNED: a parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

This IC addresses inadvertent criticality events. While the primary concern of this IC is criticality events that occur in Cold Shutdown or Refueling modes (NUREG 1449, Shutdown and Low-Power Operation at Commercial Nuclear Power Plants in the United States), the IC is applicable in other modes in which inadvertent criticalities are possible. This IC indicates a potential degradation of the level of safety of the plant, warranting a NOUE classification. This IC excludes inadvertent criticalities that occur during planned reactivity changes associated with reactor startups.

This condition is identified using the startup rate monitor. The term “sustained“ is used in order to allow exclusion of expected short term positive startup rates from planned control rod movements. These short term positive startup rates are the result of the rise in neutron population due to subcritical multiplication.

HG1

Initiating Condition

HOSTILE ACTION Resulting in Loss Of Physical Control of the Facility.

Operating Mode Applicability: All

Threshold Value: (1 **OR** 2)

1. A HOSTILE Action has occured such that plant personnel are unable to operate equipment required to maintain safety functions..

2. A HOSTILE ACTION has caused failure of Spent Fuel Cooling Systems and IMMINENT fuel damage is likely for a freshly off-loaded reactor core in pool.

Basis:

HOSTILE ACTION: An act toward a NPP or its personnel that includes the use of violent force to destroy equipment, take HOSTAGES, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, PROJECTILEs, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. HOSTILE ACTION should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the NPP. Non-terrorism-based EALs should be used to address such activities (i.e., this may include violent acts between individuals in the owner controlled area).

VITAL AREAS: any areas, normally within the PROTECTED AREA, that contains equipment, systems, components, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation.

PROJECTILE: An object directed toward a NPP that could cause concern for its continued operability, reliability, or personnel safety.

IMMINENT: Mitigation actions have been ineffective, additional actions are not expected to be successful, and trended information indicates that the event or condition will occur.

This IC encompasses conditions under which a HOSTILE ACTION has resulted in a loss of physical control of VITAL AREAs (containing vital equipment or controls of vital equipment) resulting in the loss of one or more safety functions and control of the equipment required to maintain the safety function(s) cannot be transferred to and operated from another location. These safety functions are reactivity control, RCS inventory, and secondary heat removal. If control of the plant equipment necessary to maintain safety functions can be transferred to another location, then the above initiating condition is not met.

Threshold Value 2 should also address loss of physical control of spent fuel pool cooling systems if imminent fuel damage is likely for a freshly off-loaded reactor core in pool). If the calculated SFP “time to boil” is 2 hours or less, spent fuel damage is likely.

Intentionally Left Blank

¶HG2

Initiating Condition

Other Conditions Existing Which in the Judgment of the Emergency Director Warrant Declaration of General Emergency.

Operating Mode Applicability: All

Threshold Value: (1)

1. Other conditions exist which in the judgment of the Emergency Director indicate that events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity **OR** HOSTILE ACTION that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

Basis:

HOSTILE ACTION: An act toward an NPP or its personnel that includes the use of violent force to destroy equipment, takes hostages, and /or intimidates the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. HOSTILE ACTION should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the NPP. Non- terrorism-based Threshold Values should be used to address such activities, (e.g., violent acts between individuals in the owner controlled area.)

This Threshold Value is intended to address unanticipated conditions not addressed explicitly elsewhere but that warrant declaration of an emergency because conditions exist which are believed by the Emergency Director to fall under the General Emergency class.

Intentionally Left Blank

¶HS2

Initiating Condition

Control Room Evacuation Has Been Initiated **AND** Plant Control Cannot Be Established.

Operating Mode Applicability: All

Threshold Value: (1a **AND** 1b)

1. a. Control Room evacuation has been initiated

   AND

   b. Control of the plant can **NOT** be established per AOP-28.0, Control Room Inaccessibility, within 15 minutes.

Basis:

Expeditious transfer of safety systems has not occurred but fission product barrier damage may not yet be indicated. The intent of this IC is to capture those events where control of the plant cannot be reestablished in a timely manner. The time for transfer is based on analysis or assessments as to how quickly control must be reestablished without core uncovering and/or core damage. The determination of whether or not control is established at the remote shutdown panel is based on Emergency Director (ED) judgment. The ED is expected to make a reasonable, informed judgment within the time for transfer that the operators have control of the plant.

The intent of the Threshold Value is to establish control of important plant equipment and knowledge of important plant parameters in a timely manner. Primary emphasis should be placed on those components and instruments that supply protection for and information about safety functions. These safety functions are reactivity control, RCS inventory, and secondary heat removal.

¶HS3

Initiating Condition

Other Conditions Existing Which in the Judgment of the Emergency Director Warrant Declaration of Site Area Emergency.

Operating Mode Applicability: All

Threshold Value: (1)

1. Other conditions exist which in the judgment of the Emergency Director indicate that events are in process **OR** have occurred which involve actual **OR** likely major failures of plant functions needed for protection of the public **OR** HOSTILE ACTION that results in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to the likely failure of or; (2) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels that exceed EPA Protective Action Guideline exposure levels beyond the site boundary.

Basis:

HOSTILE ACTION: An act toward an NPP or its personnel that includes the use of violent force to destroy equipment, take hostages, and /or intimidate the licensee to achieve an end. This includes attack by air, land, or water using weapons, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. HOSTILE ACTION should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the NPP. Non-terrorism-based Threshold Values should be used to address such activities, (e.g., violent acts between individuals in the owner controlled area.)

This Threshold Value is intended to address unanticipated conditions not addressed explicitly elsewhere but that warrant declaration of an emergency because conditions exist which are believed by the Emergency Director to fall under the emergency class description for Site Area Emergency.

¶HS4

Initiating Condition

HOSTILE ACTION within the PROTECTED AREA

Operating Mode Applicability: All

Threshold Value: (1)

1. A HOSTILE ACTION is occurring or has occurred within the PROTECTED AREA as reported by the site security force..

Basis:

HOSTILE ACTION: An act toward an NPP or its personnel that includes the use of violent force to destroy equipment, take hostages, and /or intimidate the licensee to achieve an end. This includes attack by air, land, or water using weapons, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. HOSTILE ACTION should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the NPP. Non-terrorism-based Threshold Values should be used to address such activities, (e.g., violent acts between individuals in the owner controlled area).

PROJECTILE: An object directed toward a NPP that could cause concern for its continued operability, reliability, or personnel safety.

This class of security events represents an escalated threat to plant safety above that contained in the Alert IC in that a HOSTILE ACTION has progressed from the Owner Controlled Area to the Protected Area.

This EAL addresses the contingency for a very rapid progression of events, such as that experienced on September 11, 2001. It is not premised solely on the potential for a radiological release. Rather the issue includes the need for rapid assistance due to the possibility for significant and indeterminate damage from additional air, land or water attack elements.

The fact that the site is under serious attack with minimal time available for further preparation or additional assistance to arrive requires Offsite Response Organizations readiness and preparation for the implementation of protective measures.

This EAL addresses the potential for a very rapid progression of events due to a HOSTILE ACTION. It is not intended to address incidents that are accidental events or acts of civil disobedience, such as small aircraft impact, hunters, or physical disputes between employees within the PROTECTED AREA. Those events are adequately addressed by other EALs.

Escalation of this emergency classification level, if appropriate, would be based on actual plant status after impact or progression of attack.

Intentionally Left Blank

¶HA1

Initiating Condition

Natural and Destructive Phenomena Affecting the Plant VITAL AREA.

Operating Mode Applicability: All

Threshold Values: (1, **OR** 2, **OR** 3, **OR** 4, **OR** 5, **OR** 6)

1. A felt earthquake validated in accordance with FNP-1-ARP-1.12, LOCATION MK5 indicates Seismic event greater than Operating Basis Earthquake (OBE).

2. Tornado **OR** high winds greater than 115 mph within the PROTECTED AREA boundary **AND** resulting in VISIBLE DAMAGE to any of the following plant structures/equipment **OR** the Control Room has indication of degraded performance of any listed systems:

Containment	Auxiliary Building
Service Water Intake Structure (SWIS)	Service Water Pond
Refueling Water Storage Tank (RWST)	Condensate Storage Tank (CST)
Diesel Generator Building	

3. Vehicle crash within PROTECTED AREA boundary **AND** resulting in VISIBLE DAMAGE to any of the following plant structures **OR** equipment therein **OR** Control Room has indication of degraded performance of those systems:

Containment	Auxiliary Building
Service Water Intake Structure (SWIS)	Service Water Pond
Refueling Water Storage Tank (RWST)	Condensate Storage Tank (CST)
Diesel Generator Building	

4. Turbine failure-generated missiles result in any VISIBLE DAMAGE to **OR** penetration of any of the following plant areas containing safety-related equipment, their controls **OR** their power supplies.

Containment	Auxiliary Building
Refueling Water Storage Tank (RWST)	Condensate Storage Tank (CST)
Diesel Generator Building	Control Room

5. Uncontrolled flooding in the following areas that results in degraded safety system performance as indicated in the control room **OR** that creates industrial safety hazards (e.g., electric shock) that precludes access necessary to operate **OR** monitor safety equipment.

Service Water Intake Structure (SWIS)
Auxiliary Building
Turbine Building Basement

6. Sustained hurricane winds greater than 74 mph onsite resulting in VISIBLE DAMAGE to plant structures within the PROTECTED AREA boundary containing equipment necessary for safe shutdown, or has caused damage as evidenced by control room indication of degraded performance of those systems

¶

Basis:

PROTECTED AREA: the area which normally encompasses all controlled areas within the security protected area fence.

VISIBLE DAMAGE: is damage to equipment or structure that is readily observable without measurements, testing, or analysis. Damage is sufficient to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, paint blistering. Surface blemishes (e.g., paint chipping, scratches) should not be included.

The Threshold Values in this IC escalate from the NOUE Threshold Values in HU1 in that the occurrence of the event has resulted in VISIBLE DAMAGE to plant structures or areas containing equipment necessary for a safe shutdown, or has caused damage to the safety systems in those structures evidenced by control indications of degraded system response or performance. The occurrence of VISIBLE DAMAGE and/or degraded system response is intended to discriminate against lesser events. The initial "report" should not be interpreted as mandating a lengthy damage assessment prior to classification. No attempt is made in this Threshold Value to assess the actual magnitude of the damage. The significance here is not that a particular system or structure was damaged, but rather, that the event was of sufficient magnitude to cause this degradation.

Threshold Value #1 is based on the OBE earthquake FSAR design basis. Seismic events of this magnitude can result in a plant VITAL AREA being subjected to forces beyond design limits, and thus damage may be assumed to have occurred to plant safety systems.

Threshold Value #2 is based on the FSAR design basis. Wind loads greater than 115 mph can cause damage to safety functions and is read from the plant meteorological tower.

Threshold Value #3 addresses crashes of vehicle types large enough to cause significant damage to plant structures containing functions and systems required for safe shutdown of the plant.

Threshold Value #4 addresses the threat to safety related equipment imposed by missiles generated by main turbine rotating component failures. This list of areas include areas containing safety-related equipment, their controls, and their power supplies. This Threshold Value is, therefore, consistent with the definition of an ALERT in that if missiles have damaged or penetrated areas containing safety-related equipment the potential exists for substantial degradation of the level of safety of the plant.

Threshold Value #5 addresses the effect of internal flooding that has resulted in degraded performance of systems affected by the flooding, or has created industrial safety hazards (e.g., electrical shock) that preclude necessary access to operate or monitor safety equipment. The inability to operate or monitor safety equipment represents a potential for substantial degradation of the level of safety of the plant. This flooding may have been caused by internal events such as component failures, equipment misalignment, or outage activity mishaps. TS-PSA-001, Table 3.3.6-4 provides that the SWIS is vulnerable due to failure of the cooling water lines or discharge expansion joints. The Auxiliary Building is vulnerable due to failure of the Service Water piping. The Turbine Building basement is vulnerable to Circulating Water line breaks. The areas include those areas that contain systems required for safe shutdown of the plant, that are not designed to be wetted or submerged.

Threshold Value #6 covers site-specific phenomena of a hurricane. The Threshold Value is based on damage attributable to the wind.

¶HA2

Initiating Condition

FIRE **OR** EXPLOSION Affecting the Operability of Plant Safety Systems Required to Establish or Maintain Safe Shutdown.

Operating Mode Applicability: All

Threshold Value: (1)

1. FIRE **OR** EXPLOSION **AND** affected system parameter indications show degraded performance **OR** plant personnel report VISIBLE DAMAGE to permanent structures **OR** safety related equipment in any of the following VITAL AREAs

:

Containment	Auxiliary Building
Service Water Intake Structure (SWIS)	Service Water Pond
Storage Pond Dam and Dike	Pond Spillway Structure
Refueling Water Storage Tank (RWST)	Condensate Storage Tank (CST)
Diesel Generator Building	Control Room

Basis:

FIRE: is combustion characterized by heat and light. Sources of smoke such as slipping drive belts or overheated electrical equipment do not constitute FIREs. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.

EXPLOSION: is a rapid, violent, unconfined combustion, or catastrophic failure of pressurized equipment that imparts energy of sufficient force to potentially damage permanent structures, systems, or components.

VITAL AREA: any area, normally within the PROTECTED AREA, which contains equipment, systems, components, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation.

VISIBLE DAMAGE: is damage to equipment or structure that is readily observable without measurements, testing, or analysis. Damage is sufficient to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, paint blistering. Surface blemishes (e.g., paint chipping, scratches) should not be included.

The areas listed contain functions and systems required for the safe shutdown of the plant to determine if the FIRE or EXPLOSION is potentially affecting any redundant trains of safety systems.

This Threshold Value addresses a FIRE / EXPLOSION and not the degradation in performance of affected systems. The reference to damage of systems is used to identify the magnitude of the FIRE / EXPLOSION and to discriminate against minor FIREs / EXPLOSIONs. The

significance here is not that a safety system was degraded but the fact that the FIRE / EXPLOSION was large enough to cause damage to these systems. Thus, the designation of a single train was intentional and is appropriate when the FIRE / EXPLOSION is large enough to affect more than one component.

The inclusion of a "report of VISIBLE DAMAGE" should not be interpreted as mandating a lengthy damage assessment prior to classification. The occurrence of the EXPLOSION with reports of evidence of damage is sufficient for declaration. The Emergency Director also needs to consider any security aspects of the EXPLOSIONs, if applicable.

¶HA3

Initiating Condition

Release of Toxic, Asphyxiant or Flammable Gases Within or Contiguous to a VITAL AREA Which Jeopardizes Operation of Systems Required to Maintain Safe Operations or Establish or Maintain Safe Shutdown.

Operating Mode Applicability: All

Threshold Values: (1 **OR** 2)

1. Report **OR** detection of toxic **OR** asphyxiant gas within **OR** contiguous to a VITAL AREA in concentrations that may result in an atmosphere IMMEDIATELY DANGEROUS TO LIFE AND HEALTH (IDLH).

2. Report **OR** detection of flammable gases in concentration greater than the LOWER FLAMMABILITY LIMIT within **OR** contiguous to a VITAL AREA.

Basis:

VITAL AREA: any area, normally within the PROTECTED AREA, which contains equipment, systems, components, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation.

IMMEDIATELY DANGEROUS TO LIFE AND HEALTH (IDLH): A condition that either poses an immediate threat to life and health or an immediate threat of severe exposure to contaminants which are likely to have adverse delayed effects on health.

LOWER FLAMMABILITY LIMIT (LFL): The minimum concentration of a combustible substance that is capable of propagating a flame through a homogenous mixture of the combustible and a gaseous oxidizer.

CONTIGUOUS: being in actual contact: touching along a boundary or at a point.

This IC is based on gases that affect the safe operation of the plant. This IC applies to buildings and areas contiguous to plant VITAL AREAs or other significant buildings or areas (i.e., service water pump house). The intent of this IC is not to include buildings (e.g., warehouses) or other areas that are not contiguous or immediately adjacent to plant VITAL AREAs.

Threshold Value #1 is met if measurement of toxic gas concentration results in an atmosphere that is IDLH within a VITAL AREA or any area or building contiguous to VITAL AREA. Exposure to an IDLH atmosphere will result in immediate harm to unprotected personnel, and would preclude access to any such affected areas.

Threshold Value #2 is met when the flammable gas concentration in a VITAL AREA or any building or area contiguous to a VITAL AREA exceed the LOWER FLAMMABILITY LIMIT. This Threshold Value addresses concentrations at which gases can ignite/support combustion. An

uncontrolled release of flammable gasses within a facility structure has the potential to affect safe operation of the plant by limiting either operator or equipment operations due to the potential for ignition and resulting equipment damage/personnel injury. Once it has been determined that an uncontrolled release is occurring, then sampling must be done to determine if the concentration of the released gas is within this range.

In accordance with NMP-FLS-005, Confined Space Procedure, examples of hazardous atmospheres include but are not limited to the following:

- Oxygen concentration less than 19.5% or greater than 23.5%.
- Flammable gas concentration at greater than 10% of the LFL or Lower Explosive Limit (LEL).
- Air contaminate concentration in excess of the Permissible Exposure Limits (PEL) as published by the Occupational Safety and Health Administration (OSHA) or a Threshold Limit Valve (TLV) published by the American Conference of Governmental Industrial Hygienists (ACGIH).
- Any other atmospheric condition that is immediately dangerous to life and health.

¶HA4

Initiating Condition

HOSTILE ACTION within the OWNER CONTROLLED AREA or Airborne Attack Threat.

Operating Mode Applicability: All

Threshold Values: (1 **OR** 2)

1. A HOSTILE ACTION is occurring or has occurred within the OWNER CONTROLED AREA as reported by the security shift supervision.

2. A validated notification from NRC of an airliner attack threat within 30 minutes of the site.

Basis:

Note: Timely and accurate communication between Security Shift Supervision and the Control Room is crucial for the implementation of effective Security EALs.

These EALs address the contingency for a very rapid progression of events, such as that experienced on September 11, 2001. They are not premised solely on the potential for a radiological release. Rather the issue includes the need for rapid assistance due to the possibility for significant and indeterminate damage from additional air, land, or water attack elements.

The fact that the site is under serious attack or is an identified attack target with minimal time available for further preparation or additional assistance to arrive requires a heightened state of readiness and implementation of protective measures that can be effective (such as on-site evacuation, dispersal, or sheltering).

Threshold 1 addresses the potential for a very rapid progression of events due to a HOSTILE ACTION. It is not intended to address incidents that are accidental events or acts of civil disobedience, such as small aircraft impact, hunters, or physical disputes between employees within the OCA. Those events are adequately addressed by other EALs.

Threshold 2 addresses the immediacy of an expected threat arrival or impact on the site within a relatively short time.

The intent of this EAL is to ensure that notifications for the airliner attack threat are made in a timely manner and that Offsite Response Organizations and plant personnel are at a state of heightened awareness regarding the credible threat. Airliner is meant to be a large aircraft with the potential for causing significant damage to the plant.

This EAL is met when a plant receives information regarding an airliner attack threat from NRC and the airliner is within 30 minutes of the plant. Only the plant to which the specific threat is made need declare the Alert.

The NRC Headquarters Operations Officer (HOO) will communicate to the licensee if the threat involves an airliner (airliner is meant to be a large aircraft with the potential for causing significant damage to the plant). The status and size of the plane may be provided by NORAD through the NRC.

¶HA5

Initiating Condition

Control Room Evacuation Has Been Initiated.

Operating Mode Applicability: All

Threshold Value: (1)

1. Entry into AOP-28.0, Control Room Inaccessibility, for Control Room evacuation.

Basis:

With the control room evacuated, additional support, monitoring and direction through the Technical Support Center and/or other emergency response facility is necessary. Inability to establish plant control from outside the control room will escalate this event to a Site Area Emergency.

¶HA6

Initiating Condition

Other Conditions Existing Which in the Judgment of the Emergency Director Warrant Declaration of an Alert.

Operating Mode Applicability: All

Threshold Value: (1)

1. Other conditions exist which in the judgment of the Emergency Director indicate that events are in process **OR** have occurred which involve actual **OR** likely potential substantial degradation of the level of safety of the plant **OR** a security event that involves probable life threatening risk to site personnel or damage to site equipment because of intentional malicious dedicated efforts of HOSTILE ACTION. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.

Basis:

HOSTILE ACTION - An act toward a Nuclear Power Plant (NPP) or its personnel that includes the use of violent force to destroy equipment, take hostages, and /or intimidate the licensee to achieve an end. This includes attack by air, land, or water using weapons, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. HOSTILE ACTION should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the NPP. Non-terrorism-based Threshold Values should be used to address such activities, (e.g., violent acts between individuals in the owner controlled area.)

This Threshold Value is intended to address unanticipated conditions not addressed explicitly elsewhere but that warrant declaration of an emergency because conditions exist which are believed by the Emergency Director to fall under the Alert emergency class.

¶Intentionally Left Blank

Intentionally Left Blank

Intentionally Left Blank

¶HU1

Initiating Condition

Natural and Destructive Phenomena Affecting the PROTECTED AREA.

Operating Mode Applicability: All

Threshold Value: (1 **OR** 2 **OR** 3 **OR** 4 **OR** 5 **OR** 6 **OR** 7)

1. A felt earthquake validated in accordance with FNP-1-ARP-1.12, LOCATION MK5.

2. Report by plant personnel of tornado **OR** high winds greater than 115 mph striking within the PROTECTED AREA boundary.

3. Crash of vehicle, large enough to cause significant damage, into plant structures containing functions or systems required for safe shutdown within the PROTECTED AREA boundary.

4. Report by plant personnel of an unanticipated EXPLOSION within the PROTECTED AREA boundary resulting in VISIBLE DAMAGE to permanent structures **OR** equipment.

5. Report of turbine failure resulting in casing penetration **OR** damage to turbine **OR** generator seals.

6. Uncontrolled flooding in the following areas:

Service Water Intake Structure (SWIS)
Auxiliary Building
Turbine Building Basement

7. Sustained hurricane force winds greater than 74 mph forecast to be at the plant site in the next four hours in accordance with FNP-0-AOP-21.0.

Basis:

PROTECTED AREA: the area which normally encompasses all controlled areas within the security protected area fence.

EXPLOSION: is a rapid, violent, unconfined combustion, or catastrophic failure of pressurized equipment that imparts energy of sufficient force to potentially damage permanent structures, systems, or components.

VISIBLE DAMAGE: is damage to equipment or structure that is readily observable without measurements, testing, or analysis. Damage is sufficient to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, paint blistering. Surface blemishes (e.g., paint chipping, scratches) should not be included.

These ICs are categorized on the basis of the occurrence of an event of sufficient magnitude to be of concern to plant operators. Areas identified in the Threshold Values define the location of the event based on the potential for damage to equipment contained therein.

Threshold Value #1 - As defined in the EPRI-sponsored "Guidelines for Nuclear Plant Response to an Earthquake", dated October 1989, a *"felt earthquake"* is:

> An earthquake of sufficient intensity such that: (a) the vibratory ground motion is felt at the nuclear plant site and recognized as an earthquake based on a consensus of control room operators on duty at the time, and (b) for plants with operable seismic instrumentation, the seismic switches of the plant are activated. For most plants with seismic instrumentation, the seismic switches are set at an acceleration of about 0.01g.

Threshold Value #2 is based on the assumption that a tornado striking (touching down) or high winds within the PROTECTED AREA may have potentially damaged plant structures containing functions or systems required for safe shutdown of the plant. The high wind 115 mph value is based on FSAR design basis. If such damage is confirmed visually or by other in-plant indications, the event may be escalated to Alert.

Threshold Value #3 addresses crashes of vehicle types large enough to cause significant damage to plant structures containing functions and systems required for safe shutdown of the plant.

For Threshold Value #4 only those EXPLOSIONs of sufficient force to damage permanent structures or equipment within the PROTECTED AREA should be considered. No attempt is made in this Threshold Value to assess the actual magnitude of the damage. The occurrence of the EXPLOSION with reports of evidence of damage is sufficient for declaration. The Emergency director also needs to consider any security aspects of the EXPLOSION, if applicable.

Threshold Value #5 addresses main turbine rotating component failures of sufficient magnitude to cause observable damage to the turbine casing or to the seals of the turbine generator. Of major concern is the potential for leakage of combustible fluids (lubricating oils) and gases (hydrogen cooling) to the plant environs. Generator seal damage observed after generator purge does not meet the intent of this Threshold Value because it did not impact normal operation of the plant. This Threshold Value is consistent with the definition of a NOUE while maintaining the anticipatory nature desired and recognizing the risk to non-safety related equipment.

Threshold Value #6 addresses the effect of flooding caused by internal events such as component failures, equipment misalignment, or outage activity mishaps. The areas included are those areas that contain systems required for safe shutdown of the plant, that are not designed to be wetted or submerged. TS-PSA-001, Table 3.3.6-4 provides that the SWIS is vulnerable due to failure of the cooling water lines or discharge expansion joints. The Auxiliary Building is vulnerable due to failure of the Service Water piping. The Turbine Building basement is vulnerable to Circulating Water line breaks causing loss of Service Air. Escalation of the emergency classification is based on the damage caused or by access restrictions that prevent necessary plant operations or systems monitoring.

Threshold Value #7 covers site-specific phenomena of the hurricane based on the severe weather mitigation procedure.

¶HU2

Initiating Condition

FIRE Within PROTECTED AREA Boundary Not Extinguished Within 15 Minutes of Detection.

Operating Mode Applicability: All

Threshold Value: (1)

1. FIRE in buildings **OR** areas contiguous to any of the following areas **NOT** extinguished within 15 minutes of control room notification **OR** control room alarm unless disproved by personnel observation within 15 minutes of the alarm:

Containment
Service Water Intake Structure (SWIS)
Auxiliary Building
Refueling Water Storage Tank (RWST)
Diesel Generator Building
Condensate Storage Tank (CST)
Control Room

Basis:

FIRE: is combustion characterized by heat and light. Sources of smoke such as slipping drive belts or overheated electrical equipment do not constitute FIREs. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.

CONTIGUOUS: being in actual contact: touching along a boundary or at a point.

PROTECTED AREA: the area which normally encompasses all controlled areas within the security protected area fence.

The purpose of this IC is to address the magnitude and extent of FIREs that may be potentially significant precursors to damage to safety systems. As used here, *Detection* is visual observation and report by plant personnel or sensor alarm indication.

The 15 minute time period begins with a credible notification that a FIRE is occurring, or indication of a VALID fire detection system alarm. Verification of a fire detection system alarm includes actions that can be taken with the control room or other nearby site-specific location to ensure that the alarm is not spurious. A verified alarm is assumed to be an indication of a FIRE unless it is disproved within the 15 minute period by personnel dispatched to the scene. In other words, a personnel report from the scene may be used to disprove a sensor alarm if received within 15 minutes of the alarm, but shall not be required to verify the alarm.

The intent of this 15 minute duration is to size the FIRE and to discriminate against small FIREs that are readily extinguished (e.g., smoldering waste paper basket). The site-specific list should be limited and applies to buildings and areas contiguous to plant VITAL AREAs or other significant buildings or areas.

¶HU3

Initiating Condition

Release of Toxic, Asphyxiant, or Flammable Gases Deemed Detrimental to Normal Operation of the Plant.

Operating Mode Applicability: All

Threshold Values: (1 **OR** 2)

1. Report **OR** detection of toxic, asphyxiant, **OR** flammable gas that has **OR** could enter the Owner Controlled Area in amounts greater than life threatening **OR** flammable concentrations that can affect NORMAL PLANT OPERATIONS.

2. Report by Local, County, **OR** State Officials for evacuation **OR** sheltering of site personnel based on an offsite toxic, asphyxiant, **OR** flammable gas event.

Basis:

NORMAL PLANT OPERATIONS: activities at the plant site associated with routine testing, maintenance, or equipment operations, in accordance with normal operating or administrative procedures. Entry into abnormal or emergency operating procedures, or deviation from normal security or radiological controls posture, is a departure from NORMAL PLANT OPERATIONs.

This IC is based on the existence of uncontrolled releases of toxic, asphyxiant, or flammable gas that may enter the Owner Controlled Area and affect normal plant operations. It is intended that releases of toxic or flammable gases are of sufficient quantity, and the release point of such gases is such that normal plant operations would be affected. Offsite events are included through a warning by local officials as the resultant affect on NORMAL PLANT OPERATIONS would be the same. This would preclude small or incidental releases, or releases that do not impact structures needed for plant operation. The Threshold Values are not intended to require significant assessment or quantification. The IC assumes an uncontrolled process that has the potential to affect plant operations, or personnel safety.

In accordance with NMP-FLS-005, Confined Space Procedure, examples of hazardous atmospheres include but are not limited to the following:

- Oxygen concentration less than 19.5% or greater than 23.5%.
- Flammable gas concentration at greater than 10% of the LFL or Lower Explosive Limit (LEL).
- Air contaminate concentration in excess of the Permissible Exposure Limits (PEL) as published by the Occupational Safety and Health Administration (OSHA) or a Threshold Limit Valve (TLV) published by the American Conference of Governmental Industrial Hygienists (ACGIH).
- Any other atmospheric condition that is immediately dangerous to life and health.

¶HU4

Initiating Condition

Confirmed SECURITY CONDITION or Threat Which Indicates a Potential Degradation in the Level of Safety of the Plant.

Operating Mode Applicability: All

Threshold Values: (1 **OR** 2 **OR** 3)

1. A SECURITY CONDITION that does NOT involve a HOSTILE ACTION as reported by security shift supervision.

2. A CREDIBLE FNP security THREAT notification.

3. A validated notification from NRC providing information of an aircraft threat.

Basis:

Note: Timely and accurate communication between Security Shift Supervision and the Control Room is crucial for the implementation of effective Security EALs.

SECURITY CONDITION: Any Security Event as listed in the approved security contingency plan that constitutes a threat/compromise to site security, threat/risk to site personnel, or a potential degradation to the level of safety of the plant. A SECURITY CONDITION does not involve a HOSTILE ACTION.

CREDIBLE THREAT: A threat is considered credible through use of FNP-0-SP-37, Threat Assessment and Security Force Protection Recommendations.

Security events which do not represent a potential degradation in the level of safety of the plant are reported under 10 CFR 73.71 or in some cases under 10 CFR 50.72. Security events assessed as HOSTILE ACTIONS are classifiable under HA4, HS4 and HG1.

A higher initial classification could be made based upon the nature and timing of the security threat and potential consequences. The licensee shall consider upgrading the emergency response status and emergency classification level in accordance with the site's Safeguards Contingency Plan and Emergency Plan.

In Threshold #1 reference is made to security shift supervision because these individuals are the designated personnel on-site qualified and trained to confirm that a security event is occurring or has occurred. Training on security event classification confirmation is closely controlled due to the strict secrecy controls placed on the plant FNP Safeguards Contingency Plan.

This threshold is based on site specific security plans. Site specific Safeguards Contingency Plans are based on guidance provided by NEI 03-12.

The intent of Threshold Value 2 is to ensure that appropriate notifications for the security threat are made in a timely manner. This includes information of a CREDIBLE THREAT. Only the plant to which the specific threat is made need declare the Notification of an Unusual Event.

The intent of Threshold Value 3 is to ensure that notifications for the security threat are made in a timely manner and that Offsite Response Organizations and plant personnel are at a state of heightened awareness regarding the credible threat. It is not the intent of this EAL to replace existing non-hostile related EALs involving aircraft.

This Threshold Value is met when a plant receives information regarding an aircraft threat from NRC. Validation is performed by calling the NRC or by other approved methods of authentication. Only the plant to which the specific threat is made need declare the Unusual Event.

The NRC Headquarters Operations Officer (HOO) will communicate to the licensee if the threat involves an airliner (airliner is meant to be a large aircraft with the potential for causing significant damage to the plant). The status and size of the plane may be provided by NORAD through the NRC.

Escalation to Alert emergency classification level would be via HA4 would be appropriate if the threat involves an airliner within 30 minutes of the plant.

A higher initial classification could be made based upon the nature and timing of the threat and potential consequences. The Emergency Director shall consider upgrading the emergency response status and emergency classification in accordance with the FNP Safeguards Contingency Plan and Emergency Plan implementing Procedures.

¶HU5

Initiating Condition

Other Conditions Existing Which in the Judgment of the Emergency Director Warrant Declaration of a NOUE.

Operating Mode Applicability: All

Threshold Value: (1)

1. Other conditions exist which in the judgment of the Emergency Director indicate that events are in process **OR** have occurred which indicate a potential degradation of the level of safety of the plant **OR** indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response **OR** monitoring are expected unless further degradation of safety systems occurs.

Basis:

This Threshold Value is intended to address unanticipated conditions not addressed explicitly elsewhere but that warrant declaration of an emergency because conditions exist which are believed by the Emergency Director to fall under the NOUE emergency class.

From a broad perspective, one area that may warrant Emergency Director judgment is related to likely or actual breakdown of site-specific event mitigating actions. Examples to consider include inadequate emergency response procedures, transient response either unexpected or not understood, failure or unavailability of emergency systems during an accident in excess of that assumed in accident analysis, or insufficient availability of equipment and/or support personnel.

¶E-HU1

Initiating Condition

Damage to a loaded cask CONFINEMENT BOUNDARY.

Operating Mode Applicability: Not applicable

Threshold Value: (1)

1. Damage to a loaded dry fuel storage cask CONFINEMENT BOUNDARY due to natural phenomena events, accident conditions **OR** any condition in the opinion of the Emergency Director that affects **OR** causes a loss of loaded dry fuel storage cask CONFINEMENT BOUNDARY.

Basis:

CONFINEMENT BOUNDARY: is the barrier(s) between areas containing radioactive substances and the environment.

A NOUE in this IC is categorized on the basis of the occurrence of an event of sufficient magnitude that a loaded cask CONFINEMENT BOUNDARY is damaged or violated. This includes classification based on a loaded fuel storage cask CONFINEMENT BOUNDARY loss leading to the degradation of the fuel during storage or posing an operational safety problem with respect to its removal from storage.

Any condition, which, in the judgment of the Emergency Director, is a potential degradation in the level of safety of the ISFSI. Emergency Director judgment is to be based on known conditions and the expected response to mitigating activities within a short time period.

Initiating Condition

Loss of RPV Inventory Affecting Fuel Clad Integrity with Containment Challenged with Irradiated Fuel in the RPV.

Operating Mode Applicability: Cold Shutdown (Mode 5)
Refueling (Mode 6)

Threshold Values: (1 **AND** 2 **AND** 3)

1. Loss of RPV inventory as indicated by ANY of the following:

Unexplained Containment sump level rise
Unexplained Reactor Coolant Drain Tank (RCDT) level rise
Unexplained Waste Holdup Tank (WHT) level rise

AND

2. RPV Level:
   a. Less than elevation 118' (Top of Active Fuel) for greater than 30 minutes
   OR
   b. RPV level **CANNOT** be monitored **WITH** indication of core uncovery for greater than 30 minutes as evidenced by ANY of the following:

Incore Seal Table RE7 > 3 mR/hr
Erratic Source Range Monitor Indication

AND

3. Containment challenged as indicated by ANY of the following:

Explosive mixture inside containment	greater than **OR** equal to 6% H_2
Pressure	greater than **OR** equal to 5 psig **WITH** CONTAINMENT CLOSURE established
	greater than **OR** equal to 54 psig **WITH** Tech Spec containment integrity intact
CONTAINMENT CLOSURE **NOT** established	

Basis:

CONTAINMENT CLOSURE: per FNP-1-STP-18.4, "Containment Integrity Verification and Closure".

For Threshold Value 1 in the cold shutdown mode, normal RCS level and RPV level instrumentation systems will normally be available. However, if all level indication were to be lost during a loss of RCS inventory event, the operators would need to determine that RPV inventory loss was occurring by observing sump and tank level changes. Sump and tank level rises must be evaluated against other potential sources of leakage such as cooling water sources inside the containment to ensure they are indicative of RCS leakage.

For Threshold Value 1 in the refueling mode, normal means of RPV level indication may not be available. Redundant means of RPV level indication will be normally installed to assure that the ability to monitor level will not be interrupted. However, if all level indication were to be lost during a loss of RCS inventory event, the operators would need to determine that RPV inventory loss was occurring

by observing sump and tank level changes. For both cold shutdown and refueling modes sump and tank level rises must be evaluated against other potential sources of leakage such as cooling water sources inside the containment to ensure they are indicative of RCS leakage.

Threshold Value 2 represents the inability to restore and maintain RPV level to above the top of active fuel. Fuel damage is probable if RPV level cannot be restored, as available decay heat will cause boiling, further reducing the RPV level.

Analysis in appropriate references indicates that core damage may occur within an hour following continued core uncovery therefore, conservatively, 30 minutes was chosen.

The GE is declared on the occurrence of the loss or imminent loss of function of all three barriers. Based on the above discussion, RCS barrier failure resulting in core uncovery for 30 minutes or more may cause fuel clad failure. With the CONTAINMENT breached or challenged then the potential for unmonitored fission product release to the environment is high. This represents a direct path for radioactive inventory to be released to the environment. This is consistent with the definition of a GE.

In the context of Threshold Value 3, CONTAINMENT CLOSURE is the action taken to secure containment and its associated structures, systems, and components as a functional barrier to fission product release under existing plant conditions. If the closure is re-established prior to exceeding the temperature or level thresholds of the RCS Barrier and Fuel Clad Barrier Threshold Values, escalation to GE would not occur.

The site-specific pressure at which CONTAINMENT is considered challenged may change based on the condition of the CONTAINMENT. If the Unit is in the cold shutdown mode and the CONTAINMENT is fully intact then the site-specific setpoint is the CONTAINMENT design pressure (54 psig). This is consistent with typical owner's groups Emergency Response Procedures. With CONTAINMENT CLOSURE established intentionally by the plant staff in preparations for inspection, maintenance, or refueling the setpoint is based on the penetration seals design of 5 psig.

In the early stages of a core uncovery event, it is unlikely that hydrogen buildup due to a core uncovery could result in an explosive mixture of dissolved gasses in CONTAINMENT. However, CONTAINMENT monitoring and/or sampling should be performed to verify this assumption and a General Emergency declared if it is determined that an explosive mixture exists.

Initiating Condition

Loss of RPV Inventory Affecting Core Decay Heat Removal Capability.

Operating Mode Applicability: Cold Shutdown (Mode 5)

Threshold Values: (1 **OR** 2)

1. Loss of Reactor Pressure Vessel (RPV) inventory affecting core decay heat removal capability with CONTAINMENT CLOSURE **NOT** established as indicated by:

   a. RPV level less than 121' (6" below Bottom ID of RCS loop)
   OR
   b. RPV level **CANNOT** be monitored for greater than 30 minutes with a possible loss of RPV inventory as indicated by unexplained level rise in any of the following:

Containment sump
Reactor Coolant Drain Tank (RCDT)
Waste Holdup Tank (WHT)

2. Loss of RPV inventory affecting core decay heat removal capability with CONTAINMENT CLOSURE established as indicated by:

   a. RPV level less than 118' (Top of Active Fuel (TOAF))
   OR
   b. RPV level **CANNOT** be monitored for greater than 30 minutes with a possible loss of RPV inventory as indicated by ANY of the following:

Containment sump level rise
Unexplained Reactor Coolant Drain Tank (RCDT) level rise
Unexplained Waste Holdup Tank (WHT) level rise
Erratic Source Range monitor indication

Basis:

CONTAINMENT CLOSURE: per FNP-1-STP-18.4, Containment Integrity Verification and Closure".

Under the conditions specified by this IC, continued lowering in RPV level is indicative of a loss of inventory control. Inventory loss may be due to an RPV breach, pressure boundary leakage, or continued boiling in the RPV.

In the cold shutdown mode, normal RCS level and reactor vessel level indication systems (RVLIS) will normally be available. However, if all level indication were to be lost during a loss of RCS inventory event, the operators would need to determine that RPV inventory loss was occurring by observing sump and tank level changes. Sump and tank level rises must be evaluated against other potential

sources of leakage such as cooling water sources inside the containment to ensure they are indicative of RCS leakage.

The 30 minute duration allows sufficient time for actions to be performed to recover needed cooling equipment. The effluent release path is not expected with closure established.

¶CS2

Initiating Condition

Loss of RPV Inventory Affecting Core Decay Heat Removal Capability with Irradiated Fuel in the RPV.

Operating Mode Applicability: Refueling (Mode 6)

Threshold Values: (1 **OR** 2)

1. **WITH** CONTAINMENT CLOSURE **NOT** established:

   a. RPV level less than elevation 121' (6" below Bottom ID of RCS loop).

   OR

   b. RPV level **CANNOT** be monitored **WITH** indication of core uncovery as evidenced by ANY of the following:

Incore Seal Table R7 > 3 mR/hr
Erratic Source Range Monitor Indication

2. **WITH** CONTAINMENT CLOSURE established

   a. RPV level less than elevation 118' (Top of Active Fuel).

   OR

   b. RPV level **CANNOT** be monitored **WITH** Indication of core uncovery as evidenced by ANY of the following:

Containment High Range Radiation Monitor R27 A **OR** B > 100 R/hr
Incore Seal Table R7 > 3 mR/hr
Erratic Source Range Monitor Indication

Basis:

CONTAINMENT CLOSURE: per FNP-1-STP-18.4, Containment Integrity Verification and Closure".

Under the conditions specified by this IC, continued lowering in RPV level is indicative of a loss of inventory control. Inventory loss may be due to an RPV breach or continued boiling in the RPV.

As water level in the RPV lowers, the dose rate above the core will rise. The dose rate due to this core shine should result in up-scaled Containment High Range Monitor indication and possible alarm. Additionally, post-TMI studies indicated that the installed nuclear instrumentation will operate

erratically when the core is uncovered and that this should be used as a tool for making such determinations.

For Threshold Value 2 in the refueling mode, normal means of RPV level indication may not be available. Redundant means of RPV level indication will be normally installed (including the ability to monitor level visually) to assure that the ability to monitor level will not be interrupted.

This effluent release is not expected with closure established.

¶CA1

Initiating Condition

Loss of RCS Inventory.

Operating Mode Applicability: Cold Shutdown (Mode 5)

Threshold Values: (1 **OR** 2)

1. Loss of RCS inventory as indicated by RPV level less than 121' 6" (bottom ID of RCS loop)

2. a. RCS level **CANNOT** be monitored for greater than 15 minutes

   AND

   b. A possible loss of RCS inventory may be occurring as indicated by unexplained level rise in ANY of the following:

Containment sump
Reactor Coolant Drain Tank (RCDT)
Waste Holdup Tank (WHT)

Basis:

These Threshold Values serve as precursors to a loss of ability to adequately cool the fuel. The magnitude of this loss of water indicates that makeup systems have not been effective and may not be capable of preventing further RPV level lowering and potential core uncovery.

The Bottom ID of the RCS Loop Setpoint was chosen because at this level remote RCS level indication may be lost and loss of suction to decay heat removal systems has occurred. The inability to restore and maintain level after reaching this setpoint would therefore be indicative of a failure of the RCS barrier.

In the cold shutdown mode, normal RCS level and RPV level instrumentation systems will normally be available. However, if all level indication were to be lost during a loss of RCS inventory event, the operators would need to determine that RPV inventory loss was occurring by observing sump and tank level changes. Sump and tank level rises must be evaluated against other potential sources of leakage such as cooling water sources inside the containment to ensure they are indicative of RCS leakage. The 15-minute duration for the loss of level indication was chosen because it is half of the CS1 Site Area Emergency Threshold Value duration.

The difference between CA1 and CA2 deals with the RCS conditions that exist between cold shutdown and refueling mode applicability. In cold shutdown the RCS will normally be intact and standard RCS inventory and level monitoring means are available. In the refueling mode the RCS is not intact and RPV level and inventory are monitored by different means.

¶CA2

Initiating Condition

Loss of RPV Inventory with Irradiated Fuel in the RPV.

Operating Mode Applicability: Refueling (Mode 6)

Threshold Values: (1 **OR** 2)

1. Loss of inventory as indicated by RPV level less than 121' 6" (bottom ID of RCS loop)

2. a. RPV level **CANNOT** be monitored for greater than 15 minutes

   AND

   b. A possible loss of RCS inventory may be occurring as indicated by unexplained level rise in ANY of the following:

Containment sump
Reactor Coolant Drain Tank (RCDT)
Waste Holdup Tank (WHT)

Basis:

These Threshold Values serve as precursors to a loss of heat removal. The magnitude of this loss of water indicates that makeup systems have not been effective and may not be capable of preventing further RPV level lowering and potential core uncovery. This condition will result in a minimum classification of Alert.

The Bottom ID of the RCS Loop Setpoint was chosen because at this level remote RCS level indication may be lost and loss of suction to decay heat removal systems may occur. The inability to restore and maintain level after reaching this setpoint would therefore be indicative of a failure of the RCS barrier.

In the refueling mode, normal means of RPV level indication may not be available. Redundant means of RPV level indication will be normally installed to assure that the ability to monitor level will not be interrupted. Sump and tank level rises must be evaluated against other potential sources of leakage such as cooling water sources inside the containment to ensure they are indicative of RCS leakage. The 15-minute duration allows CA2 to be an effective precursor to CS2.

The difference between CA1 and CA2 deals with the RCS conditions that exist between cold shutdown and refueling mode applicability. In cold shutdown the RCS will normally be intact and standard RCS inventory and level monitoring means are available. In the refueling mode the RCS is not intact and RPV level and inventory are monitored by different means.

¶CA3

Initiating Condition

Loss of All Offsite Power **AND** Loss of All Onsite AC Power to Essential Busses.

Operating Mode Applicability: Cold Shutdown (Mode 5)
Refueling (Mode 6)
Defueled

Threshold Value:

1. a. Loss of offsite power to **OR** from Start Up Transformers 1(2)A **AND** 1(2)B resulting in loss of all offsite electrical power to **BOTH** 4160V ESF busses 1(2)F **AND** 1(2)G

   AND

   b. Failure of emergency diesel generators to supply power to emergency busses.

   AND

   c. Failure to restore power to at least one emergency bus within 15 minutes from the time of loss of both offsite and onsite AC power.

Basis:

Loss of all AC power compromises all plant safety systems requiring electric power including RHR, ECCS, Containment Heat Removal, Spent Fuel Heat Removal and the Ultimate Heat Sink. When in cold shutdown, refueling, or defueled mode the event can be classified as an Alert, because of the significantly reduced decay heat, lower temperature and pressure, increasing the time to restore one of the emergency busses. Fifteen minutes was selected as a threshold to exclude transient or momentary power losses.

Consideration should be given to operable loads necessary to remove decay heat or provide Reactor Vessel makeup capability when evaluating loss of AC power to essential busses. Even though an essential bus may be energized, if necessary loads (i.e., loads that if lost would inhibit decay heat removal capability or Reactor Vessel makeup capability) are not operable on the energized bus then the bus should not be considered operable.

¶CA4

Initiating Condition

Inability to Maintain Plant in Cold Shutdown with Irradiated Fuel in the RPV.

Operating Mode Applicability: Cold Shutdown (Mode 5)
Refueling (Mode 6)

Threshold Values: (1 **OR** 2 **OR** 3)

1. An UNPLANNED event results in RCS temperature exceeding 200°F with:
   a. CONTAINMENT CLOSURE **NOT** established
   AND
   b. RCS integrity **NOT** established

NOTE 1	**The Emergency Director should not wait until the indicated time of Threshold Values 2 or 3 has elapsed, but should declare the event as soon as it is determined that the duration has or will likely be exceeded.**
NOTE 2	**If an RCS heat removal system is in operation within this time frame and RCS temperature is being reduced then Threshold Values 2 and 3 are not applicable**

2. An UNPLANNED event results in RCS temperature exceeding 200°F for greater than 20 minutes (Note) with:

   a. CONTAINMENT CLOSURE established
   AND
   b. RCS integrity **NOT** established
   OR
   c. RCS inventory reduced.

3. An UNPLANNED event results in:

   a. RCS temperature exceeding 200°F for greater than 60 minutes (Note)
   OR
   b. RCS pressure increasing greater than 10 psig

Basis:

UNPLANNED: a parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

CONTAINMENT CLOSURE: per FNP-1-STP-18.4, “Containment Integrity Verification and Closure”.

Threshold Value 1 addresses complete loss of functions required for core cooling during refueling and cold shutdown modes when neither CONTAINMENT CLOSURE nor RCS integrity are established. RCS integrity is in place when the RCS pressure boundary is in its normal condition for the cold shutdown mode of operation (e.g., no freeze seals or nozzle dams). No delay time is allowed for Threshold Value1 because the evaporated reactor coolant that may be released into the Containment during this heatup condition could also be directly released to the environment.

Threshold Value 2 addresses the complete loss of functions required for core cooling for greater than 20 minutes during refueling and cold shutdown modes when CONTAINMENT CLOSURE is established but RCS integrity is not established or RCS inventory is reduced. As in Threshold Value 1, RCS integrity should be assumed to be in place when the RCS pressure boundary is in its normal condition for the cold shutdown mode of operation (e.g., no freeze seals or nozzle dams). The allowed 20 minute time frame was included to allow operator action to restore the heat removal function, if possible.

Threshold Value 3 addresses complete loss of functions required for core cooling for greater than 60 minutes during refueling and cold shutdown modes when RCS integrity is established. The status of CONTAINMENT CLOSURE in this Threshold Value is immaterial given that the RCS is providing a high pressure barrier to fission product release to the environment. The 60 minute time frame should allow sufficient time to restore cooling without there being a substantial degradation in plant safety. The 10 psig pressure rise covers situations where, due to high decay heat loads, the time provided to restore temperature control, should be less than 60 minutes.

The Emergency Director must remain alert to events or conditions that lead to the conclusion that exceeding the Threshold Value is imminent. If, in the judgment of the Emergency Director, an imminent situation is at hand, the classification should be made as if the threshold has been exceeded.

¶CU1

Initiating Condition

RCS Leakage.

Operating Mode Applicability: Cold Shutdown (Mode 5)

Threshold Values:

1. Unable to establish or maintain pressurizer level greater than 15%.

Basis:

This IC is included as a NOUE because it is considered to be a potential degradation of the level of safety of the plant. The inability to establish and maintain level is indicative of loss of RCS inventory. Prolonged loss of RCS Inventory may result in escalation to the Alert level via either IC CA1 (Loss of RCS) or CA4 (Inability to Maintain Plant in Cold Shutdown with Irradiated Fuel in the RPV).

The difference between CU1 and CU2 deals with the RCS conditions that exist between cold shutdown and refueling mode applicability. In cold shutdown the RCS will normally be intact and RCS inventory and level monitoring means such as Pressurizer level indication and makeup volume control tank levels are normally available. In the refueling mode the RCS is not intact and RPV level and inventory are monitored by different means.

¶CU2

Initiating Condition

UNPLANNED Loss of RCS Inventory with Irradiated Fuel in the RPV.

Operating Mode Applicability: Refueling (Mode 6)

Threshold Values: (1 **OR** 2)

1. UNPLANNED RCS level lowering below 129' (RPV flange) for greater than **OR** equal to 15 minutes

2. a. RPV level **CANNOT** be monitored

   AND

   b. A possible loss of RPV inventory may be occurring as indicated by unexplained level rise in ANY of the following:

Containment sump
Reactor Coolant Drain Tank (RCDT)
Waste Holdup Tank (WHT)

Basis:

UNPLANNED: a parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

This IC is included as a NOUE because it may be a precursor of more serious conditions and, as result, is considered to be a potential degradation of the level of safety of the plant. Refueling evolutions that lower RCS water level below the RPV flange are carefully planned and procedurally controlled. An UNPLANNED event that results in water level decreasing below the RPV flange warrants declaration of a NOUE due to the reduced RCS inventory that is available to keep the core covered. The allowance of 15 minutes was chosen because it is reasonable to assume that level can be restored within this time frame using any of the redundant means of refill that should be available.

The difference between CU1 and CU2 deals with the RCS conditions that exist between cold shutdown and refueling modes. In cold shutdown the RCS will normally be intact and standard RCS inventory and level monitoring means are available. In the refueling mode the RCS is not intact and RPV level and inventory are monitored by different means.

In the refueling mode, normal means of core temperature indication and RCS level indication may not be available. Redundant means of RPV level indication will normally be installed to assure that the ability to monitor level will not be interrupted. Sump and tank level rises must be evaluated against other potential sources of leakage such as cooling water sources inside the containment to ensure they are indicative of RCS leakage.

Threshold Value 1 involves a lowering in RCS level below the top of the RPV flange that continues for 15 minutes due to an UNPLANNED event.

¶CU3

Initiating Condition

Loss of All Offsite Power to Essential Busses for Greater Than 15 Minutes.

Operating Mode Applicability: Cold Shutdown (Mode 5)
Refueling (Mode 6)

NOTE: A NOUE should not be made for pre-planned testing such as SI/LOSP testing.

Threshold Value:

1. a. Loss of offsite power to **OR** from Start Up Transformers 1(2)A **AND** 1(2)B resulting in loss of all offsite electrical power to **BOTH** 4160V ESF busses 1(2)F **AND** 1(2)G for greater than 15 minutes

   AND

   b. At least one emergency diesel generator supplying power to **EITHER** 4160V ESF buss 1(2)F **OR** 1(2)G.

Basis:

Prolonged loss of AC power reduces required redundancy and potentially degrades the level of safety of the plant by rendering the plant more vulnerable to a complete Loss of AC Power (e.g., Station Blackout). Fifteen minutes was selected as a threshold to exclude transient or momentary power losses.

¶

CU4

Initiating Condition

UNPLANNED Loss of Decay Heat Removal Capability with Irradiated Fuel in the RPV.

Operating Mode Applicability: Cold Shutdown (Mode 5)
Refueling (Mode 6)

Threshold Values: (1 **OR** 2)

NOTE: The Emergency Director should not wait until 15 minutes has elapsed, but should declare the event as soon as it is determined that the duration has or will likely exceed the Threshold Value.

1. An UNPLANNED event results in RCS temperature exceeding 200°F.

2. Loss of all RCS temperature **AND** RPV level indication for greater than 15 minutes.

Basis:

UNPLANNED: a parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

This IC is included as a NOUE because it may be a precursor of more serious conditions and, as a result, is considered to be a potential degradation of the level of safety of the plant. In cold shutdown the ability to remove decay heat relies primarily on forced cooling flow. Operation of the systems that provide this forced cooling may be jeopardized due to the unlikely loss of electrical power or RCS inventory. Since the RCS usually remains intact in the cold shutdown mode a large inventory of water is available to keep the core covered. In cold shutdown the decay heat available to raise RCS temperature during a loss of inventory or heat removal event may be significantly greater than in the refueling mode.

During refueling the level in the RPV will normally be maintained above the RPV flange. Refueling evolutions that lower water level below the RPV flange are carefully planned and procedurally controlled. Loss of forced decay heat removal at reduced inventory may result in more rapid rises in RCS/RPV temperatures depending on the time since shutdown.

Unlike the cold shutdown mode, normal means of core temperature indication and RCS level indication may not be available in the refueling mode. Redundant means of RPV level indication are therefore procedurally installed to assure that the ability to monitor level will not be interrupted. However, if all level and temperature indication were to be lost in either the cold shutdown of refueling modes, Threshold Value 2 would result in declaration of a NOUE if either temperature or level indication cannot be restored within 15 minutes from the loss of both means of indication.

The Emergency Director must remain attentive to events or conditions that lead to the conclusion that exceeding the Threshold Value is imminent. If, in the judgment of the Emergency Director, an imminent situation is at hand, the classification should be made as if the threshold has been exceeded.

¶CU6

Initiating Condition

UNPLANNED Loss of All Onsite **OR** Offsite Communications Capabilities.

Operating Mode Applicability: Cold Shutdown (Mode 5)
Refueling (Mode 6)

Threshold Values: (1 **OR** 2)

1. UNPLANNED loss of ALL of the following on-site communications capability affecting the ability to perform routine operations:

In plant telephones
Public address system
Plant radio systems

2. UNPLANNED loss of ALL of the following off-site communications capability:

ENN (Emergency Notification Network)
ENS (Emergency Notification System)
Commercial phones (Radio, PBX, Satellite, Wireless)
VOIP (Voice Over Internet Protocol)
OPX (Off Premise Extension)

Basis:

UNPLANNED: a parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

The purpose of this IC and its associated Threshold Values is to recognize a loss of communications capability that either defeats the plant operations staff ability to perform routine tasks necessary for plant operations or the ability to communicate problems with offsite authorities.

The availability of one method of ordinary offsite communications is sufficient to inform state and local authorities of plant problems. This Threshold Value is intended to be used only when extraordinary means (e.g., relaying of information from radio transmissions, individuals being sent to offsite locations, etc.) are being utilized to make communications possible.

¶CU7

Initiating Condition

UNPLANNED Loss of Required DC Power for Greater than 15 Minutes.

Operating Mode Applicability: Cold Shutdown (Mode 5)
Refueling (Mode 6)

Threshold Values: (1a **AND** 1b)

1. a. UNPLANNED loss of Vital DC power to 125 VDC Bus A **AND** B indicated by bus voltage indications less than 105 VDC

   AND

   b. Failure to restore power to at least one DC bus within 15 minutes from the time of loss.

Basis:

UNPLANNED: a parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

The purpose of this IC and its associated Threshold Values is to recognize a loss of DC power compromising the ability to monitor and control the removal of decay heat during Cold Shutdown or Refueling operations. This Threshold Value is intended to be anticipatory in as much as the operating crew may not have necessary indication and control of equipment needed to respond to the loss.

105 VDC bus voltage is based on the minimum bus voltage necessary for the operation of safety related equipment. This voltage value incorporates a margin of at least 15 minutes of operation before the onset of inability to operate those loads.

¶CU8

Initiating Condition

Inadvertent Criticality.

Operating Mode Applicability: Cold Shutdown (Mode 5)
Refueling (Mode 6)

Threshold Values: (1)

1. An UNPLANNED sustained positive startup rate observed on nuclear instrumentation.

Basis:

UNPLANNED: a parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

This IC addresses criticality events that occur in Cold Shutdown or Refueling modes such as fuel mis-loading events and inadvertent dilution events. This IC indicates a potential degradation of the level of safety of the plant, warranting a NOUE classification.

The term “sustained” is used in order to allow exclusion of expected short term positive startup rates from planned fuel bundle or control rod movements during core alterations. These short term positive startup rates are the result of the rise in neutron population due to subcritical multiplication.