DUKE ENERGY®

Thomas D. Ray
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ONS-2016-085

October 5, 2016 10 CFR 50.54(q)

Attn: Document Control Desk
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, Maryland 20852-2746

Subject: Duke Energy Carolinas, LLC
Oconee Nuclear Station, Units 1, 2, and 3
Docket Nos. 50-269, -270, and -287
Emergency Plan Revision 2016-002

Please find attached for your use and review copies of the revisions to the Oconee Nuclear Station Emergency Plan along with the associated revision instructions and 10 CFR 50.54(q) evaluation.

This revision is being submitted in accordance with 10 CFR 50.54(q) and does not reduce the effectiveness of the Emergency Plan. If there are any questions or concerns pertaining to this revision please call Pat Street, Emergency Preparedness Manager, at 864-873-3124.

By copy of this letter, two copies of this revision are being provided to the NRC, Region II, Atlanta, Georgia.

Sincerely,

Thomas D. Ray

Thomas D. Ray
Vice President
Oconee Nuclear Station

Attachments:
Revision Instructions
Emergency Plan Revision 2016-002
10 CFR 50.54(q) Evaluation(s)

AX45
NRR

ONS-2016-085

U. S. Nuclear Regulatory Commission
October 5, 2016

xc: w/2 copies of attachments

Ms. Catherine Haney
Administrator, Region II
Marquis One Tower
245 Peachtree Center., NE Suite 1200
Atlanta GA 30303-1257

w/copy of attachments

Mr. James R. Hall, Senior Project Manager
U. S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
11555 Rockville Pike
Mailstop: O-8G9A
Rockville, MD 20852 2738
(send via E-mail)

w/o attachments

Mr. Eddy Crowe
NRC Senior Resident Inspector
Oconee Nuclear Station

ELL - EC2ZF

September 8, 2016

OCONEE NUCLEAR STATION

SUBJECT: Emergency Plan Revision 2016-002

Please make the following changes to the Emergency Plan:

REMOVE	INSERT
Cover Sheet Rev. 2016-001	Cover Sheet Rev 2016-002
Record of Changes Rev. 2016-001	Record of Changes 2016-002
LOEP Rev. 2014-032, Dec. 2014	LOEP 2016-002, Sept. 2016
Section A Rev. 14-02, Oct. 2014	Section A, Rev 2016-002, Sept. 2016
Section B Rev. 2015-007, Nov. 2015	Section B, Rev 2016-002, Sept. 2016
Section H Rev. 2015-008, Oct. 2015	Section H, Rev 2016-002, Sept. 2016
Section M Rev. 2014-002, Oct. 2014	Section M, Rev 2016-002, Sept. 2016
Section P Rev. 2015-010, Nov. 2015	Section P, Rev 2016-002, Sept. 2016
Appendix 05 Rev. 2015-007, Nov. 2015	Appendix 05, Rev 2016-002, Sept. 2016

Pat Street
ONS Emergency Preparedness Manager

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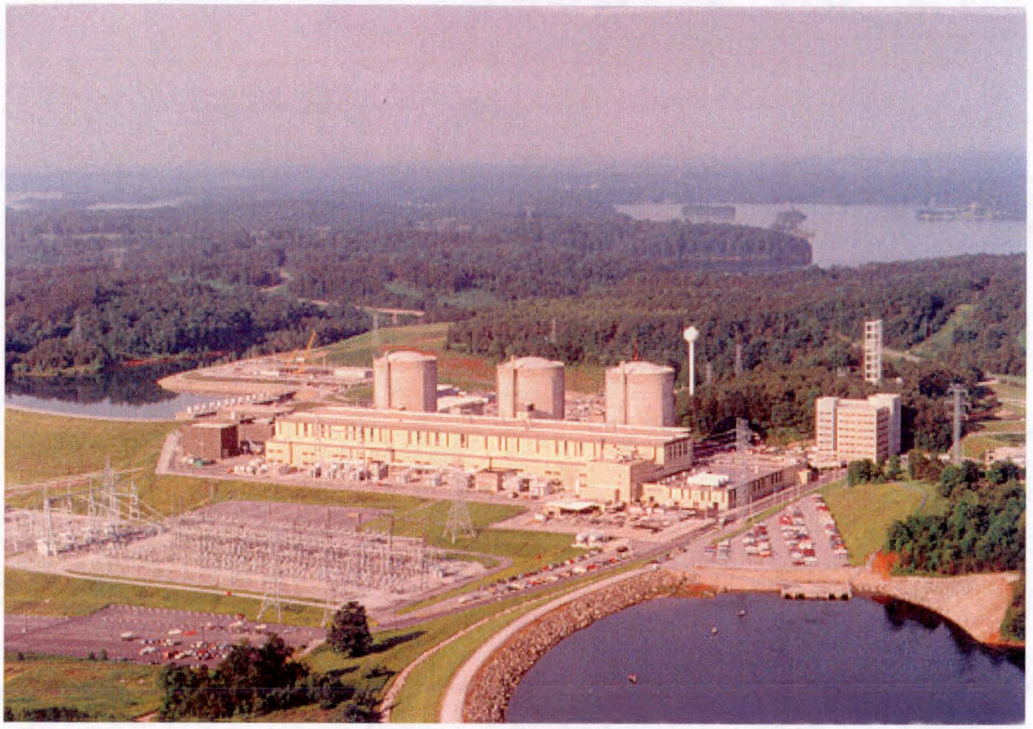
OCONEE NUCLEAR STATION
EMERGENCY PLAN



APPROVED:

Thomas D. Ray

Tom Ray

10/5/16

Date Approved

REVISION 2016-002
September, 2016

<< 10 CFR 50.54(q) Screening Evaluation Form >>

Screening and Evaluation Number	Applicable Sites	
EREG #: 02053959	BNP	☐
	CNS	☐
	CR3	☐
	HNP	☐
5AD #: N/A	MNS	☐
	ONS	X
	RNP	☐
	GO	☐

Document and Revision	ONS Emergency Plan, Rev 2016-002

Part I. Description of Activity Being Reviewed (event or action, or series of actions that may result in a change to the emergency plan or affect the implementation of the emergency plan):

Section A/Appendix 5; Revised wording to remove the requirement to update Letters of Agreement (LOA) and Memoranda of Understanding(MOA) every three years, changed to review annually and revise as necessary during Emergency Plan certification review

Section B; Change to keep responsibility for 'Classification' on site by SM/EC or TSC/EC after EOF is activated.

Section H; Title change from 'Backup' ERF's back to 'Alternate', changed in error in revision 2014-002 due to misinterpretation of definitions. This change will be in compliance with the definitions found in NEI 13-01, no change to the facilities.

Section M; 1) Revised ONS Spill Response procedure to Fleet Spill Response Procedure. 2) Added description of recovery activities following Beyond Design Basis Natural Event from INPO L4-13-3

Section P; 1) Title change to revise ONS Spill Response procedure to Fleet Spill Response Procedure.

Part II. Activity Previously Reviewed?	Yes ☐	No X
Is this activity Fully bounded by an NRC approved 10 CFR 50.90 submittal or Alert and Notification System Design Report? If yes, identify bounding source document number or approval reference and ensure the basis for concluding the source document fully bounds the proposed change is documented below: Justification:	10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification below and complete Attachment 4, Part V.	Continue to Attachment 4 , 10 CFR 50.54(q) Screening Evaluation Form, Part III
Bounding document attached (optional)		☐

<< 10 CFR 50.54(q) Screening Evaluation Form >>

Part III. Editorial Change	Yes ☐	No X
Is this activity an editorial or typographical change only, such as formatting, paragraph numbering, spelling, or punctuation that does not change intent? See attached Change Matrix Justification: Change 2 Editorial, change outline format from numbered to bullets, does not change intent. Eliminates administrative burden of matching agreement letter numbers across multiple sites in the fleet, LOA's are still tracked by title for reference. Change 3 Editorial, removed previously deleted numbered LOA's which were incorporated and superseded other LOA's in the previous revision of the E-Plan, no change of intent. Change 4 Editorial, moved 5 of the LOA's from p.2 of Appendix 5 to p.1 following the deletion of the letters in change 3, no change in intent. Change 8 Editorial, Sect B.6 starts on p. B-3 moved from p. B-2, due to information added in change 7, no change of intent. Change 9 Editorial, format changed spacing between lines and fit B.9 on to one page following the addition of information to sect B-4, no change of intent. Change 15 Editorial, ERF name changed back to 'Alternate' from 'Backup', no change to the facilities. Names change in error in Rev 2014-02. Titles are now consistent with definitions in NEI 13-01. Change 16,17,19 Editorial, procedure title change from site procedure (NEWP 5.1) to fleet procedure(AD-EN-ALL-0200) for spill response, no change in intent or methods.	10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification and complete Attachment 4, Part V & VI.	Continue to Attachment 4, Part IV and address non editorial changes

Part IV. Emergency Planning Element and Function Screen (Reference Attachment 1, Considerations for Addressing Screening Criteria)

Does this activity involve any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II? If answer is yes, then check box.

1	10 CFR 50.47(b)(1) Assignment of Responsibility (Organization Control)	
1a	Responsibility for emergency response is assigned.	X
1b	The response organization has the staff to respond and to augment staff on a continuing basis (24-7 staffing) in accordance with the emergency plan.	☐
2	10 CFR 50.47(b)(2) Onsite Emergency Organization	
2a	Process ensures that onshift emergency response responsibilities are staffed and assigned	X
2b	The process for timely augmentation of onshift staff is established and maintained.	☐
3	10 CFR 50.47(b)(3) Emergency Response Support and Resources	
3a	Arrangements for requesting and using off site assistance have been made.	☐
3b	State and local staff can be accommodated at the EOF in accordance with the emergency plan. (NA for CR3)	☐
4	10 CFR 50.47(b)(4) Emergency Classification System	

<< 10 CFR 50.54(q) Screening Evaluation Form >>

4a	A standard scheme of emergency classification and action levels is in use. (Requires final approval of Screen and Evaluation by EP CFAM.)	☐
5	10 CFR 50.47(b)(5) Notification Methods and Procedures	
5a	Procedures for notification of State and local governmental agencies are capable of initiating notification of the declared emergency within 15 minutes (60 minutes for CR3) after declaration of an emergency and providing follow-up notification.	☐
5b	Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway. (NA for CR3)	☐
5c	The public ANS meets the design requirements of FEMA-REP-10, Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants, or complies with the licensee's FEMA-approved ANS design report and supporting FEMA approval letter. (NA for CR3)	☐

<< 10 CFR 50.54(q) Screening Evaluation Form >>

Part IV. Emergency Planning Element and Function Screen (cont.)		
6	10 CFR 50.47(b)(6) Emergency Communications	
6a	Systems are established for prompt communication among principal emergency response organizations.	☐
6b	Systems are established for prompt communication to emergency response personnel.	☐
7	10 CFR 50.47(b)(7) Public Education and Information	
7a	Emergency preparedness information is made available to the public on a periodic basis within the plume exposure pathway emergency planning zone (EPZ). (NA for CR3)	☐
7b	Coordinated dissemination of public information during emergencies is established.	☐
8	10 CFR 50.47(b)(8) Emergency Facilities and Equipment	
8a	Adequate facilities are maintained to support emergency response.	☐
8b	Adequate equipment is maintained to support emergency response.	☐
9	10 CFR 50.47(b)(9) Accident Assessment	
9a	Methods, systems, and equipment for assessment of radioactive releases are in use.	☐
10	10 CFR 50.47(b)(10) Protective Response	
10a	A range of public PARs is available for implementation during emergencies. (NA for CR3)	☐
10b	Evacuation time estimates for the population located in the plume exposure pathway EPZ are available to support the formulation of PARs and have been provided to State and local governmental authorities. (NA for CR3)	☐
10c	A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.	☐
10d	KI is available for implementation as a protective action recommendation in those jurisdictions that chose to provide KI to the public.	☐
11	10 CFR 50.47(b)(11) Radiological Exposure Control	
11a	The resources for controlling radiological exposures for emergency workers are established.	☐
12	10 CFR 50.47(b)(12) Medical and Public Health Support	
12a	Arrangements are made for medical services for contaminated, injured individuals.	☐
13	10 CFR 50.47(b)(13) Recovery Planning and Post-accident Operations	
13a	Plans for recovery and reentry are developed.	X
14	10 CFR 50.47(b)(14) Drills and Exercises	
14a	A drill and exercise program (including radiological, medical, health physics and other program areas) is established.	☐
14b	Drills, exercises, and training evolutions that provide performance opportunities to develop, maintain, and demonstrate key skills are assessed via a formal critique process in order to identify weaknesses.	☐
14c	Identified weaknesses are corrected.	☐
15	10 CFR 50.47(b)(15) Emergency Response Training	
15a	Training is provided to emergency responders.	☐

<< 10 CFR 50.54(q) Screening Evaluation Form >>

Part IV. Emergency Planning Element and Function Screen (cont.)		
16	10 CFR 50.47(b)(16) Emergency Plan Maintenance	
16a	Responsibility for emergency plan development and review is established.	☐
16b	Planners responsible for emergency plan development and maintenance are properly trained.	☐

PART IV. Conclusion If no Part IV criteria are checked, a 10 CFR 50.54(q) Effectiveness Evaluation is not required, then complete Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part V. Go to Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part VI for instructions describing the NRC required 30 day submittal.	☐
If any Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part IV criteria are checked, then complete Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part V and perform a 10 CFR 50.54(q) Effectiveness Evaluation. Shaded block requires final approval of Screen and Evaluation by EP CFAM.	X

Part V. Signatures:		
Preparer Name (Print): Peter Kuhlman Peter J. Kuhlman	Preparer Signature: Peter J. Kuhlman	Date: 8/25/16
Reviewer Name (Print): Don Crowl Donald A. Crowl	Reviewer Signature:	Date: 8/30/16
Approver (EP Manager Name (Print): Pat Street	Approver Signature:	Date: 9/8/16
Approver (CFAM, as required) Name (Print)	Approver Signature: NA	Date:

Part VI. NRC Emergency Plan and Implementing Procedure Submittal Actions

Create two EREG General Assignments. • One for EP to provide the 10 CFR 50.54(q) summary of the analysis, or the completed 10 CFR 50.54(q), to Licensing.	☐
• One for Licensing to submit the 10 CFR 50.54(q) information to the NRC within 30 days after the change is put in effect.	☐

QA RECORD

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Screening and Evaluation Number	Applicable Sites	
EREG #: 02053959	BNP	☐
	CNS	☐
	CR3	☐
	HNP	☐
5AD #: N/A	MNS	☐
	ONS	X
	RNP	☐
	GO	☐

Document and Revision	ONS Emergency Plan, Rev 2016-002

Part I. Description of Proposed Change:

Section A; Revised wording to remove the requirement to update Letters of Agreement (LOA) and Memoranda of Understanding(MOA) every three years, changed to review annually and revise as necessary during Emergency Plan certification review

Appendix 5; Revised wording to remove the requirement to update Letters of Agreement (LOA) and Memoranda of Understanding(MOA) every three years, changed to review annually and revise as necessary during Emergency Plan certification review

Section B; Change to keep responsibility for 'Classification' on site by SM/EC or TSC/EC after the EOF is activated.

Section M; Added description of recovery activities following Beyond Design Basis Natural Event from INPO L4-13-3

Attachment 6, 10 CFR 50.54(q) Initiating Condition (IC) and Emergency Action Level (EAL) and EAL Bases Validation and Verification (V&V) Form , is attached (required for IC or EAL change)	Yes ☐ No X

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Part II. Description and Review of Licensing Basis Affected by the Proposed Change:

ONS Emergency Plan Rev 2016-001;

Section A(3) Agreement Letters; states Letters of agreement shall be updated as necessary and at least every three (3) years, or in accordance to conditions set by agreeing agency to insure adequate awareness on the part of all concerned of the existence and commitment to provide agreed services or assistance.

Appendix 5 Letters of Agreement; states These agreements are verified current through annual recertification of the ONS E Plan. A copy of the annual recertification (including the agreements) is maintained on file by ONS Emergency Preparedness. The actual agreements are re-confirmed every 3 years and maintained on file by ONS Emergency Preparedness and electronically filed in Fusion.

Section B

(4) Functional Responsibilities of the Emergency Coordinator; states The Emergency Coordinator and the EOF Director are the individuals responsible for making protective action recommendations to the state and county agencies. Once the Emergency Operations Facility is activated, only the EOF Director has this responsibility. Prior to the activation of the EOF, the Emergency Coordinator is responsible for making protective action recommendations, classifying/ downgrading/ escalating/terminating events, and approving notification forms to offsite agencies. These responsibilities may not be delegated.

(9) Local Agency Support; states Agreements with local agency support groups have been made to assist the Oconee Nuclear Site during emergency situations. Lists S.C. Highway Patrol and S.C. Law Enforcement Division.

Figure B-5;states in, in part, 5. Classify emergency events. Escalate/de-escalate or terminate from an emergency status if the Emergency Operations Facility is not operational. Responsibility may not be delegated.

Figure B-6;states, in part, 3. Classify emergency events. Escalate, de-escalate, terminate emergency classification. This responsibility may not be delegated.

Figure B-8b;states in part, Major Functional Area/Emergency Classification, Major Task/ EOF Director (Emergency Classification, Protective Action Recommendation, Offsite Agency Interface, ENF approval)

Section M(M.2) Recovery Organization; states Before entering the recovery phase, the EOF Director and the Emergency Coordinator shall establish a Recovery organization that is appropriate for the existing on site and off site conditions. Figure M-1 and M-2 describe suggested organization structures. They may be modified or supplemented as necessary to fit the particular circumstances. In some situations (such as no core damage), the normal onsite outage organization is adequate and the need for an offsite recovery organization is not anticipated

ONS Emergency Plan, Rev 82-2 A ASSIGNMENT OF RESPONSIBILITY, B ONSITE EMERGENCY ORGANIZATION, M RECOVERY AND RE-ENTRY PLANNING AND POSTACCIDENT OPERATION and APPENDIX 5 LETTERS OF AGREEMENT were reviewed for the changes IAW the guidelines in RIS 2005-02

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Part III. Description of How the Proposed Change Complies with Regulation and Commitments.

If the emergency plan, modified as proposed, no longer complies with planning standards in 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50, then ensure the change is rejected, modified, or processed as an exemption request under 10 CFR 50.12, Specific Exemptions, rather than under 10 CFR 50.54(q):

10 CFR 50.47 Emergency Plans;

(1) Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

- Letters of Agreement have been established and maintained on a continuous basis with the principle response organizations

(2) On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.

- Responsibilities for emergency response are still unambiguously defined, no change in staffing levels or response capabilities. Interfaces between response activities and offsite support is maintained.

(13) General plans for recovery and reentry are developed.

- No change to recovery and reentry plans, additional detail describing what the organization would look like has been added.

10 CFR Appendix E to Part 50;

A. Organization - The organization for coping with radiological emergencies shall be described, including definition of authorities, responsibilities, and duties of individuals assigned to the licensee's emergency organization and the means for notification of such individuals in the event of an emergency. Specifically, the following shall be included:

2. A description of the onsite emergency response organization (ERO) with a detailed discussion of: **a**. Authorities, responsibilities, and duties of the individual(s) who will take charge during an emergency; **b**. Plant staff emergency assignments; **c**. Authorities, responsibilities, and duties of an onsite emergency coordinator who shall be in charge of the exchange of information with offsite authorities responsible for coordinating and implementing offsite emergency measures.

- Duties. assignments and authority are still outlined in the Emergency Plan, Responsibility for 'Classification' will remain on site with the EC even when the EOF is activated

6. A description of the local offsite services to be provided in support of the licensee's emergency organization.

- Letters of Agreement are being maintained and reviewed annually that describe the expected resources and responsibilities from offsite agencies.

B. Assessment Actions - 1. states, in part, The means to be used for determining the magnitude of, and for continually assessing the impact of, the release of radioactive materials shall be described, including emergency action levels that are to be used as criteria for determining the need for notification and participation of local and State agencies, the Commission, and other Federal agencies, and the emergency action levels that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety.....

- Duties. assignments and authority are still outlined in the Emergency Plan, Responsibility for 'Classification' will remain on site with the EC even when the EOF is activated

H. Recovery - Criteria to be used to determine when, following an accident, reentry of the facility would be appropriate or when operation could be resumed shall be described.

- No change was made to the criteria for determining reentry, added description of what the recovery organization would be modeled after.

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Part IV. Description of Emergency Plan Planning Standards, Functions and Program Elements Affected by the Proposed Change (Address each function identified in Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part IV of associated Screen):

See attached change matrix

Changes 1 and 5; Delete three year requirement to update LOA's, review annually and update as necessary.

Standard;10 CFR 50.47 Emergency plans; (1) Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

Functions; (1) Responsibility for emergency response is assigned. (2) The response organization has the staff to respond and to augment staff on a continuing basis (i.e., 24/7 support) in accordance with the emergency plan.

Elements;NUREG-0654(A)(3) - Each plan shall include written agreements referring to the concept of operations developed between Federal, State, and local agencies and other support organizations having an emergency response role within the Emergency Planning Zones. The agreements shall identify the emergency measures to be provided and the mutually acceptable criteria for their implementation, and specify the arrangements for exchange of information. These agreements may be provided in an appendix to the plan or the plan itself may contain descriptions of these matters and a signature page in the plan may serve to verify the agreements. The signature page format is appropriate for organizations where response functions are covered by laws, regulations or executive orders where separate written agreements are not necessary.

Changes 6, 7, 10, 11, 12, 13, 14; 1) Revised to state EC will retain responsibility for classification when the EOF is activated and removed responsibility from EOF Director. 2) Added State of South Carolina as the agency that coordinates the resources of the State Highway Patrol and Law Enforcement Division.

Standard; 10 CFR 50.47(b)(2)... facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified

Functions; (1) The process ensures that onshift emergency response responsibilities are staffed and assigned. *(*2) The process for timely augmentation of onshift staff is established and maintained

Elements;NUREG-0654(B)(3) - Each licensee shall identify a line of succession for the emergency coordinator position and identify the specific conditions for higher level utility officials assuming this function. NUREG-0654(B)(4) - Each licensee shall establish the functional responsibilities assigned to the emergency coordinator and shall clearly specify which responsibilities may not be delegated to other elements of the emergency organization. Among the responsibilities which may not be delegated shall be the decision to notify and to recommend protective actions to authorities responsible for offsite emergency measures.

Change 18

Standard; 10 CFR 50.47(b)(13) states the following: "General plans for recovery and reentry are developed."

Functions; Plans for recovery and reentry are developed

Elements;NUREG-0654(M)(1) Each organization, as appropriate, shall develop general plans and procedures for reentry and recovery and describe the means by which decisions to relax protective measures (e.g., allow reentry into an evacuated area} are reached. This process should consider both existing and potential conditions.

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Part V. Description of Impact of the Proposed Change on the Effectiveness of Emergency Plan Functions:

Changes 1 and 5 to delete the three year requirement to update LOA's, will not be a reduction in effectiveness. The Letters of Agreement are reviewed annually for correctness and to ensure the availability of required resources. Letters are updated as necessary as part of the annual recertification of the Emergency Plan credited in NUREG-0654(P)(4) and in line with the guidance in NSIR/DPR-ISG-01 IV.E. This change will make ONS consistent with the other sites in the Duke Energy fleet that maintain LOA's with organizations that are applicable across the fleet and are not site specific ie, INPO, State of South Carolina, etc

Changes 6, 7, 10, 11, 12, 13, 14 to 1) Revise to state EC will retain responsibility for classification when the EOF is activated. 2) Added State of South Carolina as the agency that coordinates the resources of the State Highway Patrol and Law Enforcement Division. will not result in a reduction in effectiveness. Roles and responsibilities are clearly established, classification will remain on site with the EC rather than transferred to the EOF when activated.

Change 18 added information in response to INPO L4-13-3, the recovery organization would be managed like a normal outage with activities unique to the post accident situation managed by the recovery organization, no reduction in effectiveness, Section M still complies with the elements to have pans for recovery.

Part VI. Evaluation Conclusion.

Answer the following questions about the proposed change.

1	Does the proposed change comply with 10 CFR 50.47(b) and 10 CFR 50 Appendix E?	Yes X	No ☐
2	Does the proposed change maintain the effectiveness of the emergency plan (i.e., no reduction in effectiveness)?	Yes X	No ☐
3	Does the proposed change maintain the current Emergency Action Level (EAL) scheme?	Yes X	No ☐
4	Choose one of the following conclusions:		
a	The activity does continue to comply with the requirements of 10 CFR 50.47(b) and 10 CFR 50, Appendix E, and the activity does not constitute a reduction in effectiveness or change in the current Emergency Action Level (EAL) scheme. Therefore, the activity can be implemented without prior NRC approval.		X
b	The activity does not continue to comply with the requirements of 10 CFR 50.47(b) or 10 CFR 50 Appendix E or the activity does constitute a reduction in effectiveness or EAL scheme change. Therefore, the activity cannot be implemented without prior NRC approval.		☐

Part VII. Disposition of Proposed Change Requiring Prior NRC Approval

Will the proposed change determined to require prior NRC approval be either revised or rejected?	Yes ☐	No ☐

If No, then initiate a License Amendment Request in accordance 10 CFR 50.90 and AD-LS-ALL-0002, Regulatory Correspondence, and include the tracking number:_____.

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Part VIII. Signatures: EP CFAM Final Approval is required for changes affecting risk significant planning standard 10 CFR 50.47(b)(4).		
Preparer Name (Print): Peter Kuhlman	Preparer Signature: Peter J. Kuhlman	Date: 9/7/16
Reviewer Name (Print): Don Crowl	Reviewer Signature:	Date: 9/8/16
Approver (EP Manager) Name (Print): Pat Street	Approver Signature:	Date: 9/8/16
Approver (CFAM, as required) Name (Print):	Approver Signature: N/A	Date:

If the proposed activity is a change to the E-Plan or implementing procedures, then create two EREG General Assignments. • One for EP to provide the 10 CFR 50.54(q) summary of the analysis, or the completed 10 CFR 50.54(q), to Licensing.	☐
• One for Licensing to submit the 10 CFR 50.54(q) information to the NRC within 30 days after the change is put in effect.	☐

QA RECORD

Attachment to 50.54q

2016-002 Emergency Plan				
Change #	**Page #**	**Current**	**Proposed**	**Reason**
1.	**Sect. A.3**	Letters of agreement shall be updated as necessary and at least every three (3) years, or in accordance to conditions set by agreeing agency to...	Letters of agreement shall be verified correct annually and updated as necessary, through annual recertification of the ONS Emergency Plan, or in accordance to conditions set by agreeing agency to insure adequate awareness on the part of all concerned of the existence and commitment to provide agreed services or assistance.	Revised to delete the requirement to update L.O.A.'s every three years, L.O.A.'s must be reviewed annually to verify that arrangements for ORO resources remain in effect. DRR 02044546 NSIR/DPR-ISG-01 guidance
2.	**Appendix 5**	Outline format is numbered	Outline format using bullets	Editorial, Fleet EP maintains some of the letters of Agreements and do not maintain a numbering system for L.O.A.'s, that is common among the sites.
3.	**Appendix 5**	3. DELETED - S.C. Highway Patrol (Superseded by Letter #20) 4. DELETED - S.C. Law Enforcement Division (Superseded by Letter #20) 5. Greenville Health System 6. DELETED - Blue Ridge Emergency Physicians (Superseded by Letter #5) 7. DELETED - Oconee Medical Center Emergency Dept. Dir. (Superseded by Letter #5)	• Greenville Health System	Editorial, deleted the reference to the superseded LOA's, previous revision had incorporated SC Hwy Patrol and Law Enforcement

Attachment to 50.54q

2016-002 Emergency Plan				
Change #	**Page #**	**Current**	**Proposed**	**Reason**
				Division were incorporated in to SC State LOA. Blue Ridge Physician and OMH were incorporated in to Greenville Health System.
4.	**Appendix 5**	19. U. S. Department of Energy (DOE) Savannah River Site, Aiken, SC 20. State of South Carolina 21. SC/GA/NC Dose Assessment Agreements 22. Memorandum of Understanding (Joint Information Center) 23. BHI Energy - Power Services	• U. S. Department of Energy (DOE) Savannah River Site, Aiken, SC • State of South Carolina • SC/GA/NC Dose Assessment Agreements • Memorandum of Understanding (Joint Information Center) • BHI Energy - Power Services	Editorial, moved 5 LOA's from p. 2 to p.1 of Appendix 5
5.	**Appendix 5**	These agreements are verified current through annual recertification of the ONS E Plan. A copy of the annual recertification (including the agreements) is maintained on file by ONS Emergency Preparedness. The actual agreements are re-confirmed every 3 years and maintained on file by ONS Emergency Preparedness and electronically filed in Fusion.	These agreements are verified current, and updated as necessary, through annual recertification of the ONS E Plan. A copy of the annual recertification (including the agreements) is maintained on file by ONS Emergency Preparedness. The actual agreements are maintained on file by ONS Emergency Preparedness and electronically filed in Fusion.	Revised to delete the requirement to update L.O.A.'s every three years, L.O.A.'s must be reviewed annually to verify that arrangements for ORO resources remain in effect. DRR 02017686 NSIR/DPR-ISG-01 guidance
6.	**Sect B.4**	.... Prior to the activation of the EOF, the Emergency Coordinator is responsible for making protective	....Prior to the activation of the EOF, the Emergency Coordinator is responsible for making protective	Added clarification that the EC

Attachment to 50.54q

2016-002 Emergency Plan				
Change #	**Page #**	**Current**	**Proposed**	**Reason**
		action recommendations, classifying/ downgrading/ escalating/terminating events, and approving notification forms to offsite agencies. These responsibilities may not be delegated.	action recommendations, classifying/ downgrading/ escalating/terminating events, and approving notification forms to offsite agencies. Once the EOF is activated, the Emergency Coordinator will retain responsibility for making classifications. These responsibilities may not be delegated.	will retain responsibility for classification when the EOF is activated.
7.	**Sect B.4**		**IF AT ANY TIME** the EOF is Activated, **THEN** the following applies: • Classification of events are performed by either the TSC or Control Room • Immediate communication to the EOF is required upon upgrade of a classification of an event either the TSC or Control Room • Notification of Offsite Agencies are performed by the EOF Protective Action Recommendations (PAR) are performed by the EOF	Added new paragraph outlining the process for notification and classification between the TSC, CR and EOF.DRR 02007226
8.	Sect. B.6 and remaining	Sect B.6 started on p. B.2	Sect B.6 starts on p. B.3	Editorial,refor matting to account for additional information added in section B.4.
9.	Sect B.9	Local agency Support list of agreements were split across pages B-3 and B-4	Local agency Support list of agreements on page B-4	Editorial, format changed spacing between lines and fit B.9 on to one page following the addition of information from sect B-4
10.	Sect. B.9	POLICE Oconee Sheriff's Department Pickens Sheriff's Department S. C. Highway Patrol S. C. Law Enforcement Division	POLICE Oconee Sheriff's Department Pickens Sheriff's Department State of South Carolina - S. C. Highway Patrol and S. C. Law Enforcement Division	Added State of South Carolina as the agency that the Letter of agreement is with to coordinate

Attachment to 50.54q

2016-002 Emergency Plan				
Change #	**Page #**	**Current**	**Proposed**	**Reason**
				resources of the SC Hwy Patrol and Law enforcement Division.
11.	Fig. B-5 #5	5. Classify emergency events. Escalate/de-escalate or terminate from an emergency status if the Emergency Operations Facility is not operational. Responsibility may not be delegated.	5. Classify emergency events. Escalate/de-escalate or terminate from an emergency status. Responsibility may not be delegated.	Change, Responsibility for classification will remain on site in the Control Room or TSC even if the EOF is Activated to support common eof standard ERO format. PRR 02007226
12.	Fig. B-6 #3	3. Classify emergency events. Escalate, de-escalate, terminate emergency classification. This responsibility may not be delegated.		Deleted, Classifications will remain onsite from the Control Room or TSC. renumbered remaining steps. PRR 02007226
13.	Fig. B-8b fourth row under Major Task column	EOF Director (Emergency Classification, Protective Action Recommendation, Offsite Agency Interface, ENF approval)	EOF Director (Protective Action Recommendation, Offsite Agency Interface, ENF approval)	Change, Responsibility for classification will remain on site in the Control Room or TSC even if the EOF is Activated to support common eof standard ERO format. PRR 02007226

2016-002 Emergency Plan				
Change #	**Page #**	**Current**	**Proposed**	**Reason**
14.	Fig. B-8b fourth row under Major Functional Area column	Emergency Classification		Deleted, Classifications will remain onsite from the Control Room or TSC. renumbered remaining steps. PRR 02007226
15.	Sect H.1c	H.1.c Backup Emergency Response Facility (ERF)..... A Backup Technical Support Center..... A Backup Operational Support Center has been established....	H.1.c Alternate Emergency Response Facility (ERF)..... An Alternate Technical Support Center..... An Alternate Operational Support Center has been established....	Editorial, renamed Backup facilities to Alternate facilities and edited grammar. Change was made in revision 2014-02 in error. complying with the definition in NEI 13-01 the facilities meet the requirement for alternate.
16.	Sect. M.3	Recovery will be provided as directed by Oconee Nuclear Environmental Work Practice, Section 5.1, Spill Response.	Recovery will be provided as directed by AD-EN-ALL-0200, Spill Response.	Editorial, Oconee Nuclear Environmental Work Practice was superseded by AD-EN-ALL-0200
17.	Sect. M.3	Initiation of Recovery Operation - Hazardous Wastes/Materials Recovery will be provided as directed by Oconee Nuclear Environmental Work Practice, Section 5.1, Spill Response	...as directed by AD-EN-ALL-0200, Spill Response.	Editorial, NEWP 5.1 has been superseded by the fleet procedure AD-EN-ALL-0200. 50.54q performed ### DRR 02011168

Attachment to 50.54q

2016-002 Emergency Plan				
Change #	**Page #**	**Current**	**Proposed**	**Reason**
18.	p. M-3 Sect. M.2		The recovery activities would be managed much like a normal outage, except that certain activities unique to the post-accident situation may be managed by the Recovery organization. The organization would function as a matrix management organization to coordinate activities with the normal company organization. This organization may be located at the Emergency Operations Facility or the site, as appropriate.	New paragraph due to OE evaluation from INPO L4-13-3, compliance for IER L4-13-3 recovery from Beyond Design Dasis Natural Event PRR 01939122
19.	p.P-14	Section - M3 Procedure - NEWP 5.1 Procedure Title - Oconee Nuclear Environmental Work Practice, Section 5.1, Spill Response	Section - M3 Procedure - AD-EN-ALL-0200 Procedure Title - Spill Response	Editorial, updated reference title NEWP 5.1 has been superseded by the fleet procedure AD-EN-ALL-0200.

Oconee Emergency Plan
List Of Effective Pages

SECTION	PAGE NUMBER	REVISION NO.	DATE
Emergency Plan Approval Cover Sheet		Rev. 2016-002	September 2016
List of Effective Pages	Page 1 - 3	Rev. 2016-002	September 2016
List Of Figures	Page 1 - 5	Rev. 2014-02	October 2014
Record Of Changes	Page 1 - 10	Rev. 2016-002	September 2016
Table of Contents	Page 1	Rev. 2012-05	December 2012
I. Introduction	Page 1 - 5	Rev. 2012-05	December 2012
	Page i-6	Rev. 2008-02	October 2008
	Page i-6a	Rev. 2012-05	December 2012
II. Planning Standards and Evaluation Criteria			
A. Assignment of Responsibility	Page A-1 - A-8	Rev. 2016-002	September 2016
B. Onsite Emergency Organization	Page B-1 - B-21	Rev. 2016-002	September 2016
C. Emergency Response Support And Resources	Page C-1 & C-2	Rev. 2012-05	December 2012
D. Emergency Classification System	Page D-1 - D-101	Rev. 2015-007	November 2015
E. Notification	Page E-1 & E-2	Rev. 2008-02	December 2008
F. Emergency Communications	Page F-1 - F-8	Rev. 2015-007	November 2015
G. Public Information and Education	Page G-1 - G-5	Rev. 2014-02	October 2014

Oconee Emergency Plan
List Of Effective Pages

SECTION	PAGE NUMBER	REVISION NO.	DATE
H. Emergency Facilities And Equipment	Page H-1 - H-39	Rev. 2016-002	September 2016
I. Accident Assessment	Page I-1 - I-37	Rev. 2015-002	March 2015
J. Protective Response	Page J-1 - J-12	Rev. 2015-007	November 2015
K. Radiological Exposure Control	Page K-1 - K-12	Rev. 2015-004	April 2015
L. Medical And Public Health Support	Page L-1 - L-5	Rev. 2015-007	November 2015
M. Recovery And Reentry Planning And Post-Accident Operations	Page M-1 - M-5	Rev. 2016-02	September 2016
N. Exercises and Drills	Page N-1 - N-3	Rev. 2015-007	November 2015
O. Emergency Response Training	Page O-1 - O-3	Rev. 2012-05	December 2012
P. Responsibility For The Planning Effort: Development, Periodic Review and Distribution Of The Emergency Plans	Page P-1 - P-18	Rev. 2016-002	September 2016
III. APPENDICIES			
APPENDIX 1 Definitions	Page 1 - 5	Rev. 2012-05	December 2012
APPENDIX 2 Meteorology And Offsite Dose Assessment Program	Page 1 -4	Rev. 2014-03	December 2014

Oconee Emergency Plan
List Of Effective Pages

SECTION	PAGE NUMBER	REVISION NO.	DATE
APPENDIX 3 Alert And Notification System Description	Page 1 - 4	Rev. 2015-004	May 2015
APPENDIX 4 Evacuation Time Estimates	Page 1	Rev. 2013-01	October 2013
APPENDIX 5 Letters of Agreement	Page 1	Rev. 2016-002	September 2016
	Page 2	Rev. 2016-002	September 2016
APPENDIX 6 Distribution List	Page 1 - 4	Rev. 2014-02	October 2014
APPENDIX 7 Emergency Data Transmittal System	Page 1	Rev. 2012-01	June 2012
APPENDIX 8 Spill Prevention Control And Countermeasure Plan ONS Pollution Prevention Plan -cover sheet	Page 1	Rev. 2016-001	June 2016
APPENDIX 9 ONS Chemical Treatment Ponds 1, 2 and 3, Groundwater Monitoring Sampling And Analysis Plan	Page 1 - 17	Rev. 2012-05	July 2010
APPENDIX 10 Hazardous Materials Response Plan	Page 1 - 12	Rev. 2010-01	February 2010

RECORD OF CHANGES

REVISION NUMBER	EFFECTIVE DATE	REASON FOR REVISIONS
Revision 1	April 1, 1981	Meteorological Update
Revision 2	December 31, 1981	Rewrite Emergency Plan in Nureg 0654 Format
Revision 3	March, 1982	Update Emergency Plan
Revision 4	April, 1982	Revisions & Changes to update Emergency Plan
Revision 5	September 1, 1982	Revision to coincide with Crisis Management Plan
Revision 6	November 1, 1982	Revision update
Revision 7	December 14, 1982	Review and update
83-1	June 10, 1983	Changes required by action items due to annual exercise and review and general update
83-2	November 17, 1983	Changes required by review and general update
84-1	March 26, 1984	Revisions as determined by QA audit and minor editing
84-2	November 15, 1984	Revisions as determined by annual review
85-1	June 7, 1985	Revisions/changes/editing
85-2	----------	Revisions/changes/editing-annual review
86-1	March 8, 1986	New Oconee Brochure
86-2	November 13, 1986	Revisions/changes/editing-annual review
86-3	December 9, 1986	Correct changes identified as deficiencies by the NRC in Rev. 85-2.
87-1	February 4, 1987	Revision update, minor editing changes, included failed fuel accident assessment information.
87-2	----------	Revision update, minor editing changes Review Section D. Agreement letters updated.
87-4	December 10, 1987	Incorporate alternate TSC and OSC into Emergency Plan
88-1	June 7, 1988	Revised EALS in Section D.
88-2	October 14, 1988	Annual review. Minor editorial revisions.
89-1	February 28, 1989	Major revision to Section D. Added Appendix 7. Minor editorial changes.
89-2	August 14, 1989	Change to Section D. Minor editorial revisions.
89-3	January 5, 1990	Annual Review

RECORD OF CHANGES (Continued)

REVISION NUMBER	EFFECTIVE DATE	REASON FOR REVISIONS
90-1	March 1, 1990	Changes to Section D as required by NRC commitment.
90-2	June 1, 1990	Changes reflect upgrade of radiation monitor system and minor editing.
90-3	July 2, 1990	Change to Section D, Emergency Classification.
90-4	October 31, 1990	Annual Review
91-1	January 21, 1991	Section D revision. (RIA upgrade)
91-2	February 20, 1991	Section D revision. (TS to SLC)
91-3	March 22, 1991	Section D revision. (RIA upgrade); Section D revision. (SLB revision)
91-5	September 19, 1991	Section D revision. (RIA upgrade)
91-6	December 16, 1991	Annual review.
92-1	March 1, 1992	Section D (RIA upgrade). Minor editorial changes.
92-2	June 30, 1992	Major Revision
92-3	October 29, 1992	Annual review
92-4	12/31/92	Section B, D, H, J, Appendix 4, 5 & 6 changes.
93-1	03/01/93	Sections D, G, H, N, P, and Appendix 6
93-2	05/07/93	Sections A, B, D, Appendix 5 and 6
93-3	07/23/93	Sections A, B, G, H, I, J, L, M, N, & Appendix 6
93-4	08/11/93	Sections B, D, and Appendix 5
93-05	01/01/94	Annual Review, Incorporation of EPA-400 guidelines.
94-01	03/15/94	Additions of Appendix 8 and 9. - (Minor revisions)
94-02	05/09/94	Changes to Appendix 5, Pages 1 and 2; Changes to Appendix 6, Pages 2 and 4; State of South Carolina Agreement Letter
94-03	05/25/94	Changes to Appendix 5, Page 2; Changes to Appendix 6, Pages 4 and 5; INPO Agreement Letter
94-04	06/06/94	Changes to Appendix 5, Page 2; Change Teledyne Isotopes Badge Service agreement letter to Northeast Utilities Service Company
94-05	08/08/94	Changes to Section D
94-06	12/29/94	Annual review. Editorial changes, minor revisions.

RECORD OF CHANGES (Continued)

REVISION NUMBER	EFFECTIVE DATE	REASON FOR REVISIONS
95-01	02/23/95	Changes to Sections B, G, Appendix 5.
95-02	10/23/95	Annual review and changes
95-03	11/01/95	Section D. Change, Incorporated new EAL'S.
95-04	12/31/95	Calendar 1996, HAZMAT Changes, RP/14 deleted
96-01	02/13/96	Changes to Sections B, D, and N.
96-02	06/25/96	Changes to Section D
96-03	07/96	Changes to Section D
96-04	12/96	Annual review, editorial changes, minor changes with major change to Appendix 10.
97-01	07-97	Section B, I, Appendix 5 & 7, with editorial/minor changes to Section H & P
97-02	12-97	Annual review and editorial/minor changes
98-01	02-98	Section D, page 35. Correction of title on Enclosure 4.3
98-02	03-98	Section N, page 1 & 2, Added part a (General) to Section N.2 to ensure drills conducted between NRC evaluated exercises are performed in accordance with 10CFR50, Appendix E, Section IV.F.2.b
98-03	04-98	List of Figures page number corrections, Added Emergency Operation Facility to Figure H-15, Figure H-20 reformatted. Added Agreement Letter with Keowee-Key Volunteer Fire Department, Appendix 5, #24. Appendix 10 - Hazardous Materials Response Plan, corrections on Table of Contents with minor revisions. Headings on Appendix 10, Figure 2 with minor revisions.
98-04	12-98	Annual review and editorial/minor changes.
99-01	03-99	The ONS Technical Specifications have been converted to a set of Technical Specifications based on NUREG 1430. "Standard Technical Specifications Babcock and Wilcox Plants." Replaced the description phrases (titles) in Section D for Operating Modes with the Mode number from Improved Technical Specifications. In Section I the portion describing leak rate volume percent per day was changed to percent of the containment air weight per day. The reference to Tech Spec 4.4.1.1 was changed to reference Improved Technical Specification 5.5.2. NOTE: The implementation date of Improved Tech Specs was moved from March 4, 1999 to March 27, 1999, therefore the revision date for revision 99-01 will depict February when the actual administrative changes were completed.

RECORD OF CHANGES (Continued)

REVISION NUMBER	EFFECTIVE DATE	REASON FOR REVISIONS
99-02	12-99	Annual review and editorial/minor changes
2000-01	04-2000	Addition of List of Effective Pages
2000-02	05/2000	Editorial /minor changes
2000-03	12/2000	Annual review and editorial/minor changes
2001-01	02/07/2001	Additions and corrections as result of 50.54(t) audit. Additional information added to Basis Document and additional EAL's resulting from EP drill critiques.
2001-02	08/2001	Changes in areas of responsibility. Added note concerning RVLS to Fission Product Barrier Matrix; 2001 calendar; information added to EP Functional Area Manual; added/updated information on annual average meteorology; Appendix 5; Appendix 6; editorial/minor changes.
2001-03	12/2001	Added information in Basis Document concerning a reactor building containment break. Replaced the 2001 calendar with the 2002 calendar. Editorial/minor changes.
2002-01	01/02	The present Oconee Nuclear Station Emergency Operating Procedure is written in a different format and with some different terms than the earlier version. The term PTS (Pressurized Thermal Shock) has replaced TSOR (Thermal Shock Operating Range). This is only a change in terminology. The additional EAL is to ensure a site specific credible threat results in a declaration of a notification of Unusual Event (NOUE). This change is also intended to achieve an appropriate level and consistent response Nationwide.
2002-02	06/02	Section B - minor changes; Section D - Added information requested by Emergency Coordinators to Enclosure 4.1; Section G - Rewrite of entire section; Section H - Updated information on Figure H-4 relating to Met Data; Appendix 5 - Updated Letters of Agreement; and miscellaneous spelling/grammar errors.
2002-03	09/02	Section A - Compliance with the NRC Security Interim Compensatory Measure (ICM) issued 02/25/02; Section P - Audit frequencies per revised 10 CFR 50.54 (t) as stated in Federal Register Vol 64, 03/29/99. Appendix 1 - Added definition of monthly and Semi-Annual; Appendix 5, Agreement Letters, updated #17, Appendix 6 - Changed name on 78A. Miscellaneous corrections.
2003-01	02/03	Section D - RIA setpoints change, Section G - 2003 Calendar, Appendix 3 - Siren upgrade, new map (i-5) ; Appendix 5 - Agreement Letters, Appendix 6 - Issued To change, Section B, E, F editorial/minor changes
2003-02	08/03	Section D - incorporates additional guidance for the Emergency Coordinator/EOF Director related to classification of a high energy line break, such as a Main Steam Line Break. In addition, Section D has been retyped using a consistent font style - no changes in content resulted from the retype.

RECORD OF CHANGES (Continued)

REVISION NUMBER	EFFECTIVE DATE	REASON FOR REVISIONS
2004-01	02/04	Incorporates a retype of the majority of the sections as an editorial change to adopt a consistent format: Section G - Added information concerning One Mile Exclusion Area Signs; Section H - Strip Chart Recorders were removed under an NSM; Section J - Incorporated guidance on the use of KI as a protective action recommendation; Section K - changed KI dose to 5 REM CDE from 25 REM; Appendix 4 - Incorporate results of Evacuation Time Estimate; Appendix 5 - Revised Agreement Letters
2004-02	12/21/04	Editorial changes to correct typos, drawings, and title/organizational names. This revision also incorporates clarifying information from the latest Evacuation Time Estimate (ETE); clarification of offsite agency responsibilities for protective actions for impediments and special populations; revised EAL #2 for Enclosure 4.3, Unusual Event IC #2; clarification of ERO activation after normal working hours; and revisions to the site's SPCC Plan included in Appendix 8. In addition to these changes, applicable references have replaced generic references in Figure P-1. This revision also incorporates the 2005 Calendar distributed to the 10 mile EPZ population.
2005-01	02/01/05	Section D, Enclosure 4.7, Page 66 - Duke Power Hydro-Electric Group has revised the Lake Keowee water level from 807 to 815.5 feet for initiating a Condition B. This elevation is used in Enclosure 4.7 for classifying the event as an Unusual Event. The Hydro -Electric Group notifies the Control Room when Condition B has been declared. No protective actions by the plant are changed.
2005-02	05/17/05	Section I & Letters of Agreement - Incorporates an editorial revision that describes the makeup of Field Monitoring Teams and updated Agreement Letters. I.7&8 replaced "....personnel from Radiation Protection and Chemistry." with "..a RP Technician and a Driver." Editorial Change - Chemistry personnel no longer perform the function of FMT Driver. FMT Drivers are now provided by other groups.
2005-03	08/24/05	Revision 2005-03 incorporates an addendum for the Fire Department/Volunteer Fire Department Agreement Letters. This addendum was added as a result of NRC guidance provided to utilities. The addendum to these letters provides guidance on the use of the Incident Command System at ONS and identifies the ONS Fire Brigade Leader as the on-scene commander and site-interface for responding offsite fire departments.
2005-04	09/15/05	Revision 2005-04 is a change to Page 66, Enclosure 4.7, Emergency Action Levels #1 - Reservoir elevation greater than or equal to 807.0 feet with all spillway gates open and the lake elevation continues to rise. This change undoes Revision 2005-01 which changed Keowee Lake level from 807 feet elevation to 815.5 feet elevation. This revision was determined to be a non conservative change in that it delayed the Unusual Event emergency classification. Appendix 5, Agreement Letter #21 has been updated.
2005-05	01/09/06	Revision 2005-05 incorporates editorial changes that clarify organizational charts/responsibilities, revise procedure references, replaces public information calendar, and replaces obsolete survey instruments. Agreement Letters #16 and #19 were updated.

RECORD OF CHANGES (Continued)

REVISION NUMBER	EFFECTIVE DATE	REASON FOR REVISIONS
2006-03	06/8/06	Section D - Change #1 Revised initiating condition #2 for the Alert classification for Enclosure 4.6 (Fire/Explosions and Security Events). This change is based on a correction to the NEI White Paper, Enhancements to Emergency Preparedness Programs For Hostile Actions which was endorsed in a letter from the NRC on December 8, 2005. Change #2 - Renumbered Emergency Action Levels throughout Section D to match the numbering scheme found in RP/0/B/1000/001 (Emergency Classification) procedure - Renumbering makes it easier for procedure users to locate the correct emergency action level in the Basis Document. Appendix 5 - Agreement Letters #8, 14,15 & 23 were updated.
2006-04	11/06	Reference changes to the deletion of the Clemson EOF and incorporates reference to the Charlotte EOF. In addition, miscellaneous editorial changes are included in this revision.
2007-01	03/07	Appendix 5 Agreement Letters that have been updated/revised.
2007-02	12/07	Editorial changes including a revised 50 mile radius map (Figure B), a revision to the Emergency Classification Basis Section D , the 2008 Emergency Planning Calendar, a revised layout drawing for the JIC, a revised listing of portable survey instruments, the latest renewal of existing agreement letters and a revised Ground Water Monitoring Plan
2008-01	09/08	The original order of the EALs created a human performance trap. The first fission barrier column that the procedure user reviews is the RCS Barrier column which is on the left side of the page. The second fission barrier column that is reviewed is the Fuel Clad Barrier which is in the center of the page. This order gives the procedure user the mindset that the EALs are listed in the same order: RCS EAL followed by the Fuel Clad EAL. Changing the order of the EALs is not a deviation from the approved EAL scheme but is a difference. This change does not constitute a decrease in the effectiveness of the EPLAN since the EALs are exactly the same.
2008-02	10/08	As of this change 2008-02, the Emergency Plan is now available on NEDL/SCRIBE and has been completely re-issued. All changes in the future to the Emergency Plan will be completed thru NEDL/SCRIBE. The following Agreement Letters were also updated: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 19 and 21.
2009-01	02/09	Revised existing information relating to organization names that have changed, removed specific names and replaced with a title to mitigate the need for future revisions due to personnel changes, and changed staging location names based on changes made to area designation names; however staging will still occur in same area. Changes made only reflect actual organization names, functional position names, and current location names being used to make the E-Plan more accurately reflect current information. No changes are being made to the process or conduct of the how the E-Plan is to be implemented.

RECORD OF CHANGES (Continued)

REVISION NUMBER	EFFECTIVE DATE	REASON FOR REVISIONS
2010-10	02/10	Revised existing information relating to changes made to the callback system, who performs the dose assessments, the basis information for the Containment Barrier EAL based on NEI 99-01 Rev 5 FAQ lessons learned. Made name change for Oconee Medical Center, corrected information relating to testing frequency for major elements referenced in the E-Plan, the new neutron instrument used by radiation protection, and street name change for figure H-3A. Changes made are the result of the Annual Review process and no changes are being made to the process or conduct of how the E-Plan is to be implemented. The following Agreement Letters were also updated: Number - 6, 8, 13, 14, 15, 16, 18, 20, 22, & 23.
2011-01	05/11	Figure B-10 - Redistribution of support for Field Monitoring Teams from Chemistry to Business Management and Work Control. Section D - Basis corrected to delete reference to USFAR Table 15-114 which has been deleted, revised ICs 4.3.A.3 and 4.4.A.3, EAL A to align with RP/0/B/1000/001, revised ICs and EALs to add levels of operating modes that represent the operating levels of hot shutdown, cold shutdown and hot standby were listed, added "AC" back to IC 4.5.A.1 where it had been inadvertently deleted, add SSF to IC 4.6.U.1, correct IC 4.5.G.1, EAL 1 to reflect SSF maintaining Mode 3 (hot standby) rather than hot shutdown, add new ICs for Jocassee Dam condition A and B declarations, correct misprint in IC 4.7.A.2, EAL B, correct formatting errors, and add Security EALs. Section F - deleted onsite areas requiring phone notifications for site assembly due to new wireless system being installed in those areas. Section G - replace 2010 calendar with 2011 calendar. Figure H-1 - revised room layout to reflect current arrangement. Section N - Revised the testing cycle for the EPLAN from a 5 year cycle to a 6 year cycle. Appendix 5 - update letters of agreement.
2011-02	10/11	This evaluation supports a request to revise the Oconee (ONS), McGuire (MNS), and Catawba (CNS) Emergency Plans to allow for an alternate approach for compliance with 10 CFR 50.47(b)(2) relative to meeting the minimum staffing requirement during emergencies for site Radiation Protection (RP) personnel and the Emergency Operations Facility (EOF) position staffing to that in Table B-1 in NUREG-0654, endorsed by Regulatory Guide 1.101.
2012-01	06/12	Section F - A change to the process for answering the 4911 emergency phone calls. The new process will have both Operations and Security(SAS) answering the phone. Appendix 7 -Will clarify the ERDS related system description verbiage from the modem based data transfer system to the new VPN System.
2012-02	06/12	The NRC published Federal Register notice [RIN 3150-AI10], "Enhancements to Emergency Preparedness Regulations" on November 23, 2011. The amendments contained in the rule are summarized as twelve (XII) topics with varying implementation due dates. Emergency Plan changes to the following sections (C, D, H, I, J, P, and Appendix 1) are made in accordance with the rule and the appropriate guidance documents pertaining to Topic V – Emergency Action Level for Hostile Action, Topic VI – Emergency Declaration Timeliness, Topic VIII – Emergency Operation Facility (Performance Based), Topic IX – Emergency Response Organization Augmentation at Alternate Facility, and Topic XI – Protective Actions for On-site Personnel.

RECORD OF CHANGES (Continued)

REVISION NUMBER	EFFECTIVE DATE	REASON FOR REVISIONS
2012-03	06/13	Added Agreement Letter 25 - G&G Metal Fabrication to provide Hale pump technical support and Agreement Letter 26 Operating Agreement between Duke Energy's Lincoln Combustion Turbine Facility & MNS, CNS and ONS Nuclear Supply Chain concerning an Emergency Supply of Diesel Fuel.
2012-04	12/12	Section B - This change is to incorporate the new staffing analysis for the new EP rule and editorial changes.
2012-05	12/12	Revised Section D, Enclosure 4.3 to add threshold values for unit vent sampling as a compensatory measure. Unit vent sampling is performed on the 6th floor auxiliary building at sampling equipment where manual grab samples are retrieved per HP/0/B/1000/060-D. Additionally, the use of RIA 56 was added as a compensatory measure for Site Area Emergency and General Emergency Classifications. This change allows for classification of gaseous radiological releases in the event of a loss of either RIA-45 or 46. This change only clarifies the values to be used in the event normal monitoring is not available. The plan is also being revised based on annual review requirements, changes are mainly editorial or formatting. Additional changes are being made to reflect current name changes, update Agreement letters, Spill Prevention and Control, and Groundwater monitoring programs.
2013-01	10/13	• Section D - Added clarification in the basis for Loss of Shutdown function. • Section I - Revised to reference procedures versus RPSM 11.7 which has been deleted. • Section J - Revised to incorporate latest revision to ETE. Deleted climate data tables which were duplicative to information contained within the ETE (Appendix 4). • Section P - Updated appropriate references. • Appendix 4 - Added latest ETE as reference.
2014-01	03/14	• Section B - Removed reference to having home addresses listed in the emergency telephone directory as these were never listed in the telephone directory and clarified EOF Services Group actions. Updated titles of ERO positions in the TSC and OSC consistent with duty roster. • Section D - Added clarification for which RIA-45 is to be used. Respectively, it is expected that 1RIA-45, 2RIA-45 and 3RIA-45 would be used in connection with Enclosure 4.3, Abnormal Rad Level/Radiological Effluent. 4RIA-45 is not specifically related to a unit and therefore it is not applicable to Enclosure 4.3. • Section G - Removed Calendar and replaced with Note that the calendar is retained on file with EP Staff. • Section H - Eliminated drawings of Alternate TSC and Alternate OSC as these are for implementation and not needed in Emergency Plan. Removed implementation details from Primary TSC and Primary OSC drawings. Corrected Figure H-20 and shifted table alignment. • Section J - Provided editorial corrections to procedure numerical references where applicable. • Section M - Provided clarification of EOF Services listed on Figure M-2. • Section P - Provided editorial corrections to procedure numerical references where applicable, and changed a reference from the EP Functional Area Manual to a fleet administrative procedure reference (EP FAM to AD-EP-ALL-0001). Eliminated reference to HR Emergency Plan. • Appendix 5 - Removed all copies of the Letters of Agreement and indicated they are included by reference. The actual Letters of Agreement are retained on file by the EP Staff.

RECORD OF CHANGES (Continued)

REVISION NUMBER	EFFECTIVE DATE	REASON FOR REVISIONS
2014-02	10/14	• Section A - Revised for change from pagers to notify the ERO to using cell phones. Shift Manager delegates actual activation of notification device to Security if available or qualified operator if security is unable. • Section B - Revised responsibility for Radwaste function from Chemistry Group to Operations Group. • Section D - Revised responsibility for Radwaste function from Chemistry Group to Operations Group, including reference to chemistry procedures to operation procedures. • Section F - Revised for change from pagers to notify the ERO to using cell phones. Shift Manager delegates actual activation of notification device to Security if available or qualified operator if security is unable. • Section G - Procedure number changes • Section H - Removed specific locations of kits as these were insufficiently detailed and did not contain all kit locations. • Section I - Procedure number changes. • Section J - Procedure number changes. • Section M - Procedure number changes, title changes. • Section N - Changes to show new rules including 8 year cycle, consistency with fleet documents practices, and format. • Section P - Revised responsibility for independent audit from NSRB to NOS Manager, deleted duplicated paragraph and updated the listing of the implementing procedures. • Appendix 6 - Updated distribution list to reflect new format of E Plan and associated implementing procedures.
2014-003	12/14	Changes made associated with the modification from Raddose V to URI, and updates to WEBEOC.
2015-001	01/15	Changes made to Section F, EOF Communications and Figure F-1.
2015-002	03/15	Changes made as a result of superseding SH/0/B/2005/002, EP Fam 3.19 and Appendix 5.
2015-003	04/15	Changes made to Section D consisting of Protected Service Water replacing the Station Auxiliary Service Pump as a result of system modification. Replaced Selective Signaling with DEMNET
2015-004	5/15	E-Plan changes made to Sections App 3, D, F, H, K, & P and the Table of Contents consisting of AD-EP ALL-0203 & AD-EP ALL-0204 procedure reference changes and changes from Selective Signaling to DEMNET. Also includes title changes from Operations Shift Manager to Shift Manager. • Appendix 3: Revised Selective Signaling to DEMNET • Section D: Revised Selective Signaling to DEMNET and removed OSM • Section F: Revised Selective Signaling to DEMNET, removed OSM, and SH/0/B/2005/002 to AD-EP ALL-0203 • Section H: Removed specific equipment reference to reduce E-plan revisions • Section K: Implementation for AD-EP-ALL-0204 for administration of KI, and title changes from Operations Shift Manager to Shift Manager • Section P: Reference updates SH/0/B/2005/003 to AD-EP ALL-0204
2015-006	9/15	E-Plan changes made to Section H and Section P, consisting of Emergency Operating Facility (EOF) changes and revised ONS floor plans to correctly indicate ERO positions within ERFs in Section H and update procedure references in Section P.

RECORD OF CHANGES (Continued)

REVISION NUMBER	EFFECTIVE DATE	REASON FOR REVISIONS
2015-007	4/16	Changes to update Letters of Agreements and references throughout; State of SC supersedes SC Highway Patrol and SC Law Enforcement Division, Greenville Health System has acquired Oconee Medical Center and Blue ridge Physicians. Change to enhance the BASIS of 4.6.U.1 to add damage to 'nearby' equipment in response to AR 01910385, clarifies damage isolated to non-safety components would not necessitate entry in to an Unusual Event. Enhancement in Section D to the terms 'Condition A' , which will be replaced by the term 'Imminent Failure' and 'Condition B' which will be replaced by 'Potential Failure' in 2016. The change was driven by FERC in order to minimize confusion when communicating with offsite organizations in accordance with Hydro Emergency Action Plans. Change corrected spelling from Manger to Manager on p. F-4. change 15 updated Figure J-5 to current Site Layout, added Site Support Complex, PSW Building and labeled RP Building.
2016-001	6/16	E-Plan change made to Appendix 8, Spill Prevention, Control and Countermeasure Plan (SPCC Plan), 1) revised contents of the SPCC due to change in inventory on site, addition of new used oil storage area, update to contact information and name change from Duke Power to Duke energy. 2) Moved the contents of the SPCC out of the Emergency Plan and include by reference the location as an implementing program of the Emergency Plan. Hard copy to be maintained by Environmental Services and retrievable electronically in Fusion. AR 02031855.
2016-002	9/16	Section A/Appendix 5; Revised wording to remove the requirement to update Letters of Agreement (LOA) and Memoranda of Understanding(MOA) every three years, changed to review annually and revise as necessary during Emergency Plan certification review Section B; Change to keep responsibility for 'Classification' on site by SM/EC or TSC/EC after EOF is activated. Section H; Title change from 'Backup' ERF's back to 'Alternate', changed in error in revision 2014-002 due to misinterpretation of definitions. This change will be in compliance with the definitions found in NEI 13-01, no change to the facilities. Section M; 1) Revised ONS Spill Response procedure to Fleet Spill Response Procedure. 2) Added description of recovery activities following Beyond Design Basis Natural Event from INPO L4-13-3 Section P; 1) Title change to revise ONS Spill Response procedure to Fleet Spill Response Procedure.

A. ASSIGNMENT OF RESPONSIBILITY (Organizational Control)

Overall Response Organization

1.a The Oconee Nuclear Station Emergency Plan is a coordinated effort involving: site personnel, site emergency plans, plant facilities and equipment, the emergency resources of Duke Energy Company corporate organization, emergency services of various local, state, and federal agencies having appropriate jurisdiction or concern for public health and safety.

FEDERAL

NRC (Nuclear Regulatory Commission)
DHS (Department Homeland Security)
EPR (Emergency Preparedness And Response)
FEMA (Federal Emergency Management Agency)
DHS/EPR/FEMA
DOE (Department of Energy)

Note: NRC, FEMA and DOE will coordinate response of other Federal Agencies per the National Response Plan, Nuclear/Radiological Incident Annex.

STATE

State of North Carolina -

See State of South Carolina FNF Plan

Note: North Carolina counties are located in the Oconee Ingestion Pathway.

State of South Carolina -

SC Emergency Management Division
SC Department of Health and Environmental Control, Bureau of Solid and Hazardous Waste Management

Note: These two agencies are the lead agencies in SC and coordinate activities of other departments.

State of Georgia -

See State of South Carolina FNF Plan

Note: Georgia counties are located in the Oconee Ingestion Pathway.

COUNTY

See Oconee County FNF Plans
See Pickens County FNF Plans

l.b During the first critical hours (until outside agencies responsible for public health and safety can properly respond), the Operations Shift Manager on duty at the Oconee Nuclear Station assumes responsibility for initiating protective action required for any location within the Site Boundary or Emergency Planning Zones that may be affected as a result of an emergency. The Operations Shift Manager will determine the emergency action level. Notification of Unusual Events dictate that offsite agencies be notified and that site management and corporate management are made aware of the event. If no further deterioration transpires, the event is closed out and agencies so notified. However, if the event is escalated and determined that a higher action level exists, the Emergency Response Organization is activated.

Pickens County, Oconee County, the State of South Carolina Warning Point, and the Nuclear Regulatory Commission are notified of any emergency status. The Corporate Office is notified of all emergency classifications and would provide support to the site as requested.

The Pickens County and Oconee County Emergency Management Agencies coordinate designated agency response through their Emergency Operation Centers. Until the State of South Carolina Emergency Organization is in a position to respond to the radiological emergency, the local county emergency preparedness offices will be responsible for the public and will make the necessary response required to provide for the health, safety and welfare of the public. Until the State of South Carolina is in place at their emergency operations center, direct contact will be made through the designated warning point in Columbia, South Carolina.

After the station manager assumes the role as Emergency Coordinator in the Technical Support Center, the Operations Shift Manager is then able to devote his full attention to the Control Room. The Technical Support Center will provide contact to offsite agencies until relieved by the Emergency Operations Facility. Technical support and accident mitigation strategy will be provided to the control room by the Technical Support Center.

Once the EOF Director assumes control of the Emergency Operations Facility, the Technical Support Center will be relieved of the responsibility of contact with offsite agencies. The EOF Director is responsible for providing technical information to the local and state governmental agencies that will be utilized to determine actions required to protect the health and safety of the public.

During a security event involving an intrusion/attempted intrusion into the site by a hostile force after normal working hours, activation of the Technical Support Center will be delayed for personnel safety. In this situation the Emergency Operations Facility may be activated and relieve the Operations Shift Manager of his Emergency Coordinator responsibilities. This transfer of Emergency Coordinator responsibilities directly to the Emergency Operations Facility will allow the Operations Shift Manager to devote his full attention to the control room.

The Emergency Operations Facility will augment the plant emergency organization staff with additional Duke Energy management, (both administrative and technical personnel). The Charlotte EOF will be staffed with qualified personnel from the Duke Energy Nuclear General Office and Catawba and McGuire Nuclear Stations. The lines of authority, responsibilities and functions for the EOF Organization are established in the Oconee Nuclear Station Emergency Plan. Functions are:

-Management of offsite Duke Energy emergency response
-Coordination of radiological and environmental assessment
-Protective Action Recommendations (PARS) for the public
-Coordination of emergency response activities with federal, state, and local agencies.

1.c Interrelationships of Response Organizations

Block diagrams, Figure Al, show the interrelationships of County, State, and Federal government agencies with the Oconee Nuclear Station Emergency Response Organization during any given emergency.

1.d. Emergency Coordinator (Figure B-5)

The Station Manager is designated as the individual who shall be in charge of the plant emergency response at the Oconee Nuclear Station. However, the Operations Shift Manager has been given the authority and the responsibility to initiate emergency actions until the Station Manager or his designated alternate is available. Once the Emergency Operations Facility is activated, the EOF Director becomes responsible for the functions as shown in B-6.

1.e. Emergency Response - 24 hours per day

The Switchboard at the Oconee Nuclear Station is operated twenty-four hours a day, seven days a week. The Oconee Nuclear Station has assigned duty personnel who are on call by notification device after hours and on weekends. Rosters are listed at the switchboard, in the Operations Shift Manager's office for ready access, and on the ONS WEB Page, (Computer System).

Duty personnel are assigned to the Emergency Response Organizations as first responders since they can be readily reached after hours and weekends. Recall procedures for emergency response is shown as Figure A-2A (weekdays Monday-Thursday 0700-1730), Figure A-2B (after hours, weekends, holidays). Security will activate the ERO notification device. In the event Security is not available to perform the activities such as during a security threat the OSM or designee will activate the ERO.

2.a Assignment of Responsibilities

See Oconee County FNF Plans
See Pickens County FNF Plans
See State of South Carolina FNF Plans

2.b Legal Basis for Authority

See Oconee County FNF Plans
See Pickens County FNF Plans
See State of South Carolina FNF Plans

3. Agreement Letters

Appendix 5 is a display of agreement letters

Letters of agreement shall be verified correct annually and updated as necessary, through annual recertification of the ONS Emergency Plan, or in accordance to conditions set by agreeing agency to insure adequate awareness on the part of all concerned of the existence and commitment to provide agreed services or assistance.

4. Continuity of Resources

The Station Vice-President is the individual responsible for assuring continuity of resources within the Oconee Nuclear Station Emergency Plan. The EOF Director in the Emergency Operations Facility is responsible for assuring continuity of resources in an emergency situation.

FIGURE A1

DUKE ENERGY COMPANY
OCONEE NUCLEAR STATION

INTER-RELATIONSHIP OF RESPONSE ORGANIZATIONS

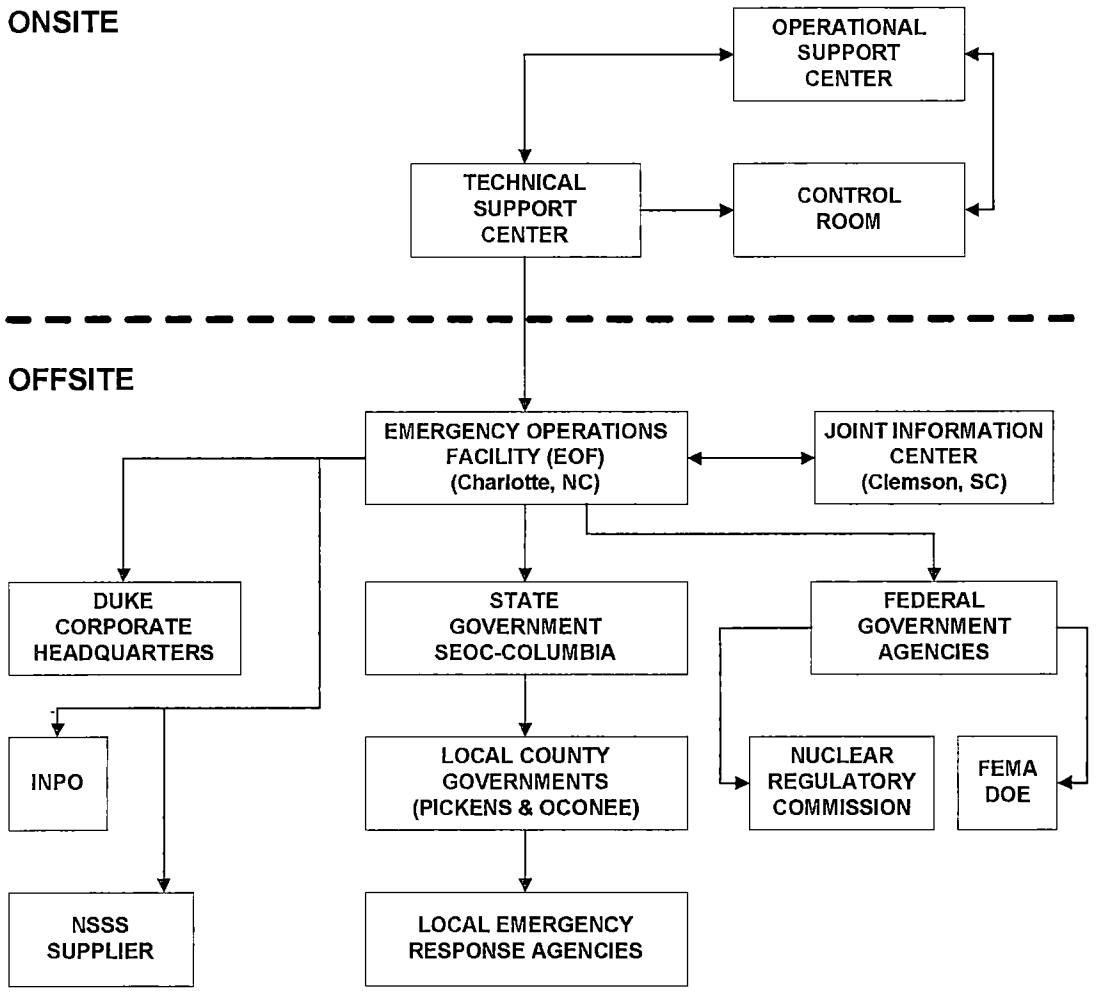
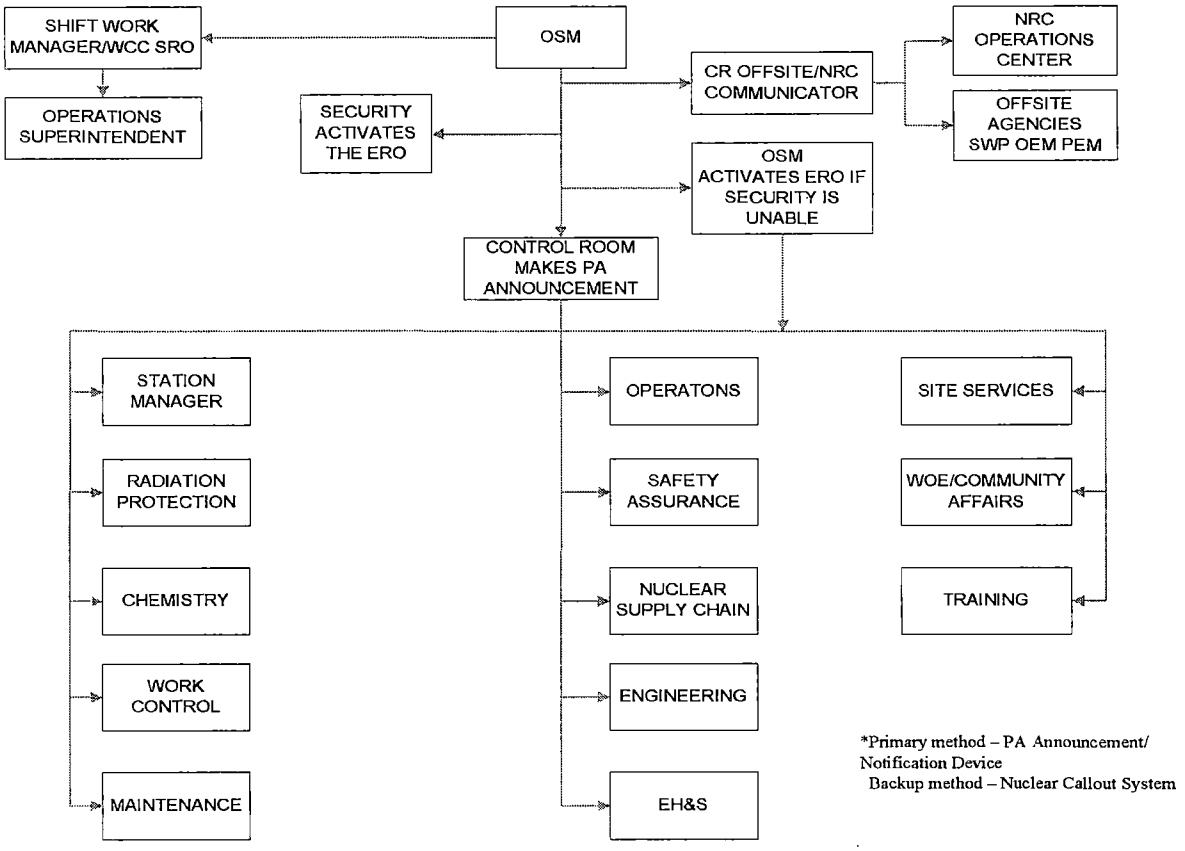


FIGURE A-2A

DUKE ENERGY COMPANY
OCONEE NUCLEAR SITE

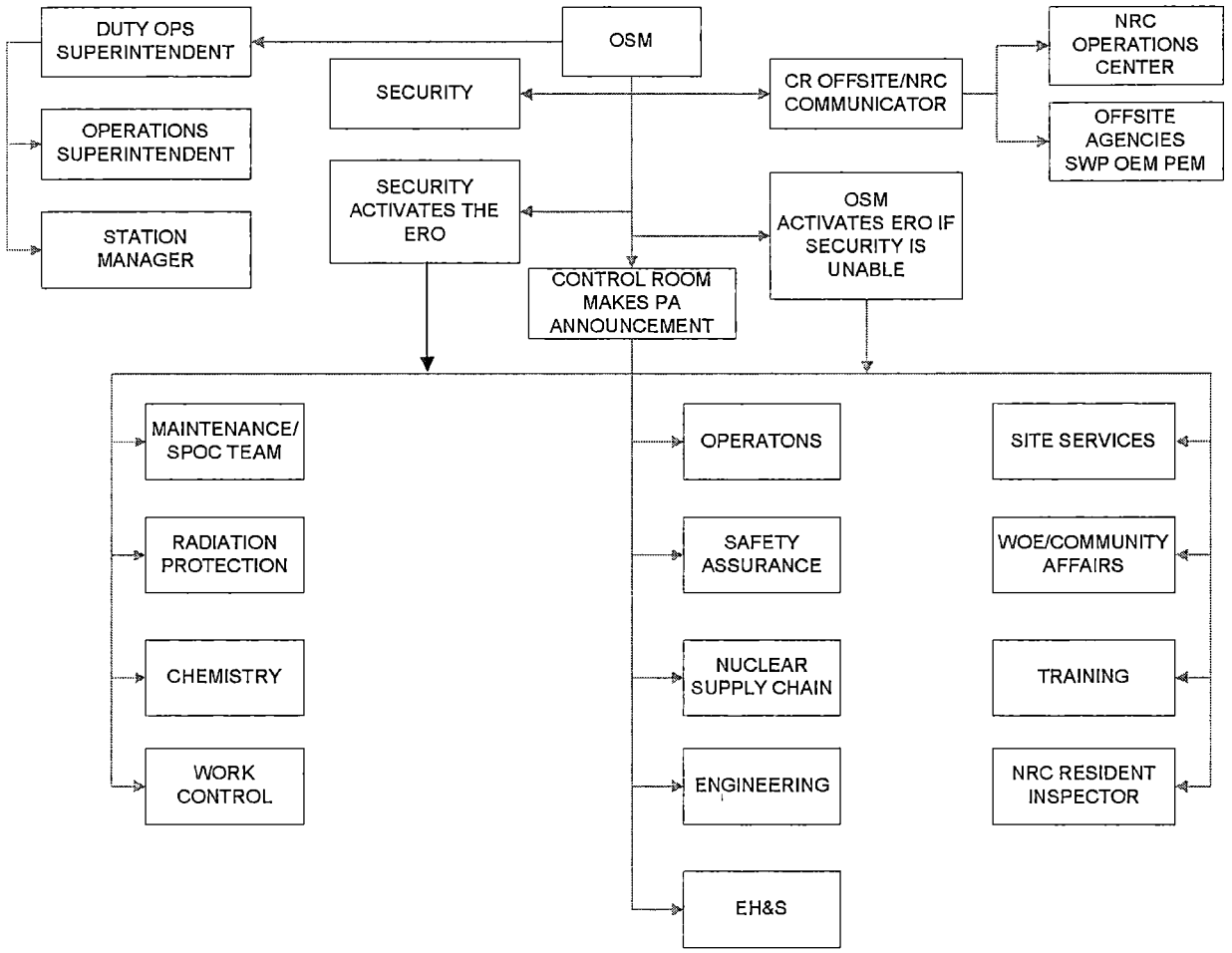
EMERGENCY ORGANIZATION RECALL – NORMAL WORKING HOURS*



*Primary method – PA Announcement/ Notification Device
Backup method – Nuclear Callout System

FIGURE A-2B

DUKE ENERGY COMPANY
OCONEE NUCLEAR SITE
EMERGENCY ORGANIZATION RECALL – BACKSHIFT, HOLIDAYS, WEEKENDS*



* Primary Method - PA Announcement/
Notification Device
Back up Method - Nuclear Callout System

FIGURE A-3

RESPONSIBILITY FOR EMERGENCY RESPONSE FUNCTIONS

Emergency Class

Emergency Response Function	Unusual Event	Alert	Site Area Emergency	General Emergency
Supervision of reactor operations and manipulation of controls	CR	CR	CR	CR
Management of plant operations	CR	TSC	TSC	TSC
Technical Support to reactor operations	CR	TSC	TSC	TSC
Management of corporate emergency response resources	CR	EOF	EOF	EOF
Radiological effluent and environs monitoring, assessment, and dose projections	CR	EOF	EOF	EOF
Inform state and local emergency response organizations and make recommendations for public protective actions	CR	EOF	EOF	EOF
Management of recovery operations (Onsite)	CR	TSC	TSC	TSC
Management of recovery operations (Offsite)			EOF	EOF
Technical support of recovery operations	CR	TSC	TSC	TSC

Note: The Emergency Response Organization will be activated at the Operations Shift Manager's discretion for an emergency classification of Unusual Event. For any classification above an Unusual Event, the Emergency Response Organization will be activated.

B. ONSITE EMERGENCY ORGANIZATION

Adequate staffing to provide for initial emergency response in key functional areas is maintained at all times, timely augmentation of response capabilities is available, and the interfaces among various onsite response activities and offsite support and response activities are specified.

B.1. Emergency Response Organization

Figures B-1 through B-6 shows the Oconee Nuclear Site Emergency Response Organization that would be established during an incident along with the duties the different groups would assume. Designation of personnel to the Emergency Response organization is determined by the particular job expertise of an individual. This assures that these personnel are qualified to carry out their responsibilities during an emergency. The normal staffing assignments at the Oconee Nuclear Site include emergency response responsibilities. See Figures B-10 for emergency responsibilities for designated groups.

The Emergency Response Organization is outlined in Division/Section Directives. These directives establish the duties, responsibilities and alternates for each required emergency response position. Response procedures have been established for each section through these Directives.

B.2. Emergency Coordinator - (24 hour)

As a result of training and day-to-day experiences in the normal operating mode at the Oconee Nuclear Site, the Operations Shift Manager will assume authority and responsibility for any emergency that may arise at the site. He will assume control of the situation, alert and warn personnel and others, take necessary onsite remedial action, obtain necessary outside aid and notify management and appropriate offsite agencies. The authority vested in this position by Duke Energy management enables the Operations Shift Manager to declare an emergency as necessary to protect the plant, site personnel, and the general public. He is vested with the authority to provide protective action recommendations to state and local agencies for implementing offsite emergency measures.

The Operations Shift Manager will continue with these responsibilities until relieved by the Station Manager (alternate).

B.3. Alternates for Emergency Coordinator

In an emergency situation where the Station Manager/Emergency Coordinator is unavailable, for whatever reason, and an acting Station Manager has not been designated in writing, an alternate will be contacted. Alternates are personnel with intimate knowledge of plant operations and will fulfill the position as TSC Emergency Coordinator when assigned duty. Alternates are designees appointed by the Station Manager.

Note: Emergency Telephone Directory, provides names and phone numbers for the Emergency Coordinators listed above.

B.4 Functional Responsibilities of the Emergency Coordinator

Figure B-5 defines the duties and responsibilities of the Emergency Coordinator within the emergency response organization.

The Emergency Coordinator and the EOF Director are the individuals responsible for making protective action recommendations to the state and county agencies. Once the Emergency Operations Facility is activated, only the EOF Director has this responsibility. Prior to the activation of the EOF, the Emergency Coordinator is responsible for making protective action recommendations, classifying/ downgrading/ escalating/terminating events, and approving notification forms to offsite agencies. Once the EOF is activated, the Emergency Coordinator will retain responsibility for making classifications. These responsibilities may not be delegated.

IF AT ANY TIME the EOF is Activated, **THEN** the following applies:

- Classification of events are performed by either the TSC or Control Room
- Immediate communication to the EOF is required upon upgrade of a classification of an event either the TSC or Control Room
- Notification of Offsite Agencies are performed by the EOF

Protective Action Recommendations (PAR) are performed by the EOF.

B.5 Minimum Staffing Requirements for Nuclear Power Plant Emergencies

Figure B-8(a/b) identifies the positions by title and major tasks to be performed by the persons assigned to the functional areas of emergency activity within 45 to 75 minutes. The TSC and OSC will be activated within 75 minutes of event classification. The EOF (Figure B-9) will also be staffed and operational by a minimum staff within 75 minutes of event classification.

A detailed analysis demonstrating that on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in Figure B-8a is located in ONS-OSSA-12212012 Rev: 0.

B.6 Interface - Onsite, Offsite Organizations

(Figure A-1) shows the interfaces between and among the onsite functional areas of emergency activity, site support, local services support, and State and Local government response organizations. The onsite Technical Support Center, Operational Support Center, and the Emergency Operations Facility is shown.

B.7 Minimum Staffing Requirements - Corporate Level

Personnel from the corporate location will provide assistance to the Oconee Nuclear Station in the areas of dose assessment, coordination of news media and severe accident analysis. These people will respond on an as needed basis.

The Emergency Response Facility Organization is shown on Figures B-4A through B-4D. Division/Section Directives detail the emergency response organization and are included as implementing procedures.

Should an event occur at another Duke Energy nuclear facility concurrent with an event at Oconee Nuclear Site, additional resources would be required to support the EOF Organization. Figure B-11 shows the supplemental EOF organization that would be required to manage a multi-site event. An additional Assistant EOF Director would function as the lead manager to support the second site. The EOF Director would have overall emergency management responsibility for both events.

B.8 Contractor/Private Organizations - Technical Assistance

Private Contractors and/or companies that would be available to augment and support the emergency organization:

Waste Management	Chem Nuclear
Bartlett Nuclear	Emergency Equipment Supplier
SEG	(e.g. Safe Industries, Inc.)
Alaron	AREVA

Additional groups that could respond to emergencies would be contacted by the EOF Services Group at the Emergency Operations Facility.

B.9 Local Agency Support

Agreements with local agency support groups have been made to assist the Oconee Nuclear Site during emergency situations.

POLICE -

Oconee Sheriff's Department

Pickens Sheriff's Department

State of South Carolina - S. C. Highway Patrol and S. C. Law Enforcement Division

AMBULANCE -

Oconee Memorial Hospital - Emergency Medical Services

MEDICAL -

Oconee Memorial Hospital - Greenville Health System

FIRE FIGHTING -

Oconee Rural Fire Association

Keowee-Ebenezer Fire Department

Corinth-Shiloh Fire Department

Six-Mile Fire Department

Keowee Fire Department

RADIOLOGICAL MONITORING -

Pickens County Emergency Management Agency

Oconee County Emergency Management Agency

EVACUATION OF POPULATION -

Oconee County Emergency Management Agency

Pickens County Emergency Management Agency

HOSPITAL -

Oconee Memorial Hospital

USE OF BUILDINGS -

Oconee County School District

Pickens County School District

FIGURE B-1
OCONEE NUCLEAR STATION
EMERGENCY RESPONSE ORGANIZATION
FUNCTIONAL AREAS OF EMERGENCY RESPONSE

1. Emergency Response Coordination
   - Operations Shift Manager
   - Station Manager
   - Division Managers
   - Section Managers

2. Plant Systems Operations
   - Superintendent of Operations
   - Operations Shift Managers
   - Operations Engineers
   - On Shift Staff (Operations)
   - Engineering

3. Accident Assessment
   - Emergency Coordinators
   - Operations Shift Managers
   - Operations Engineers
   - Shift Managers
   - Site Engineering
   - Severe Accident Analysis Group (GO)

4. Radiological Environmental Survey and Monitoring
   - Contract service
   - Radiation Protection Section

5. First Aid/Rescue, Firefighting
   - Medical Emergency Response Team Members
   - Fire Brigade

6. Personnel Monitoring
   - Radiation Protection Section

7. Decontamination
   - Radiation Protection Section

FIGURE B-1
OCONEE NUCLEAR STATION
EMERGENCY RESPONSE ORGANIZATION

8. Security of Plant and Access Control
   - Duke Security (ONS and Oconee JIC)
   - Building Security/Access & Control (Charlotte EOF)

9. Repair/Corrective Actions
   - Nuclear Supply Chain
   - Site Services Group

10. Personnel Accountability
    - Division Managers
    - Section Managers
    - Supervisors
    - Duke Security

11. Radiological Accident Assessment
    - Radiation Protection Section (ONS/GO/CNS/MNS)
    - Site Engineering
    - Operations Group
    - Chemistry Group
    - Severe Accident Analysis Group (GO)

12. Communications
    - Operations
    - Safety Assurance
    - Training
    - Nuclear Assurance

13. Radiation Protection Section
    - Radiation Protection Section

14. Plant Chemistry
    - Chemistry Group

FIGURE B-1
OCONEE NUCLEAR STATION
EMERGENCY RESPONSE ORGANIZATION

15. Radwaste Operations
    Operations Group

16. Technical Support
    Site Engineering

17. Manpower Planning and Logistical Support
    Work Control Group
    Nuclear Supply Chain
    Site Services Group

18. Public Information
    Corporate Communications - Joint Information Center

19. Licensee Representative to State County EOC
    Site Engineering

FIGURE B-2
OCONEE NUCLEAR STATION
TECHNICAL SUPPORT CENTER ORGANIZATION CHART

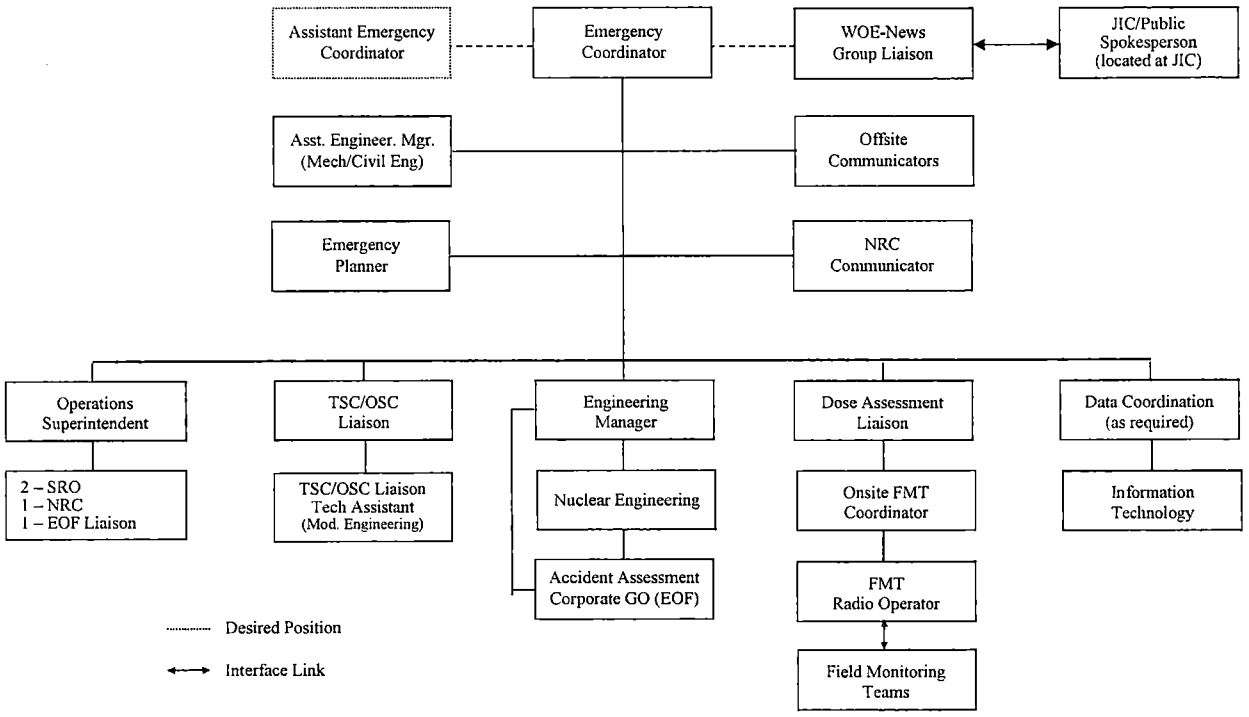


FIGURE B-3
OCONEE NUCLEAR STATION
OPERATIONAL SUPPORT CENTER ORGANIZATION CHART

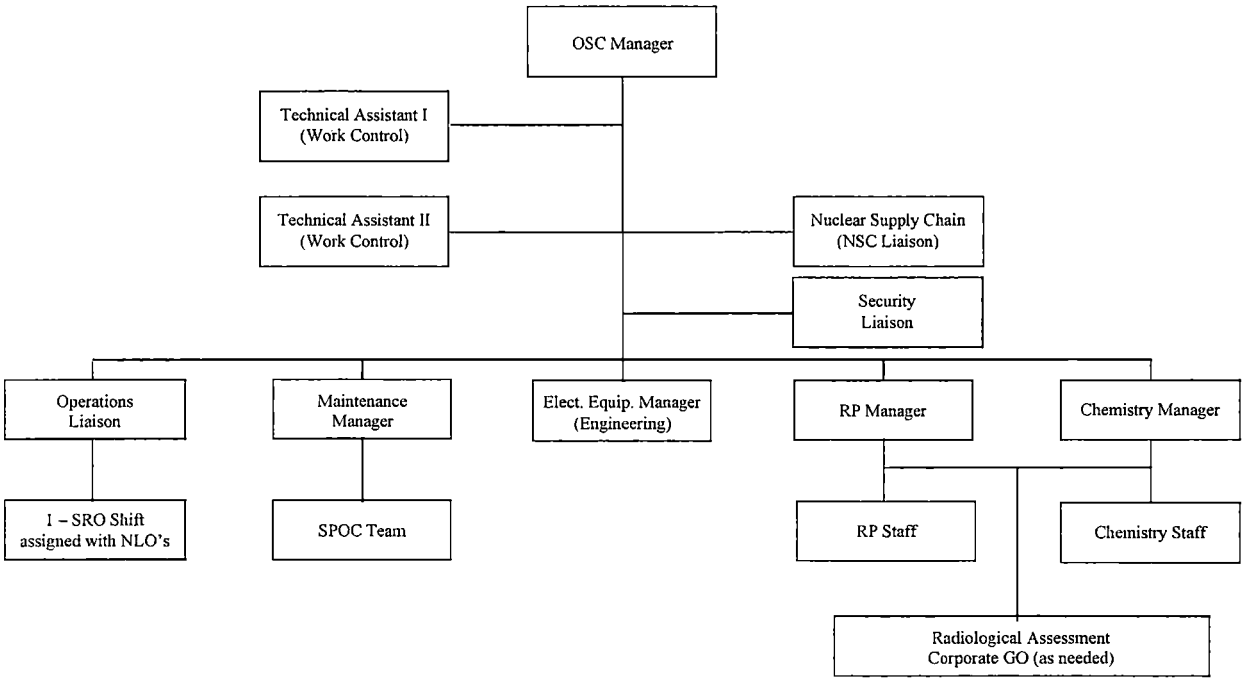


FIGURE B-4A
OCONEE NUCLEAR STATION
Emergency Operations Facility

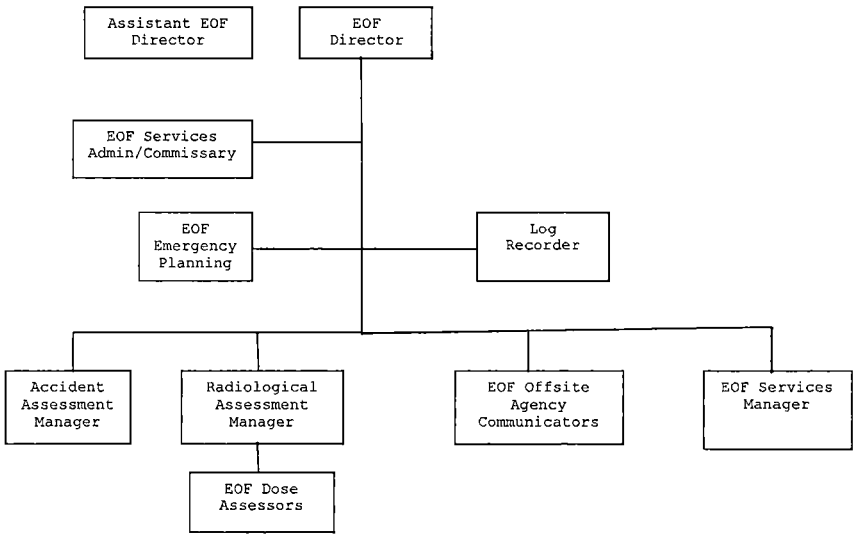


FIGURE B-4B
DUKE ENERGY COMPANY
OCONEE NUCLEAR STATION

EMERGENCY OPERATIONS FACILITY

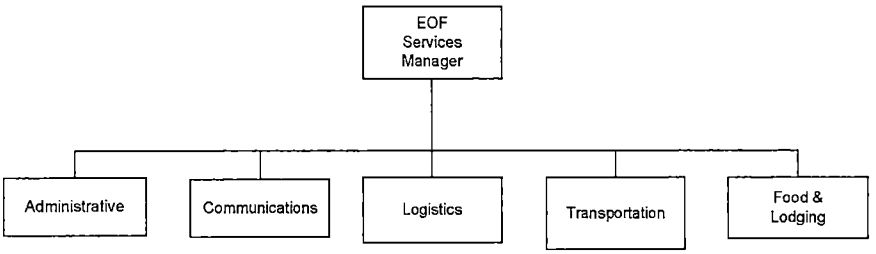


FIGURE B-4C
OCONEE NUCLEAR STATION
EMERGENCY OPERATIONS FACILITY

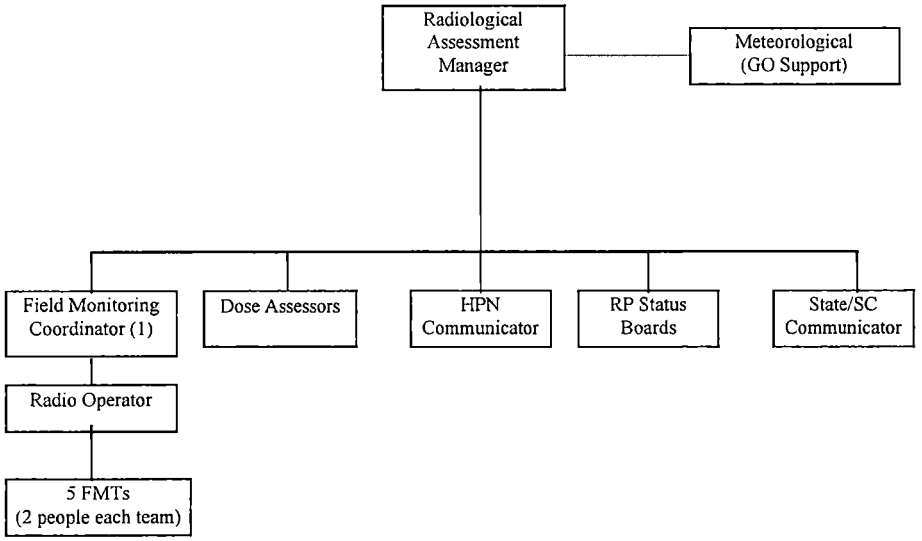


FIGURE B-5
OCONEE NUCLEAR STATION
EMERGENCY COORDINATOR DUTIES

Duties and Responsibilities:

1. Activate the Emergency Response Organization (Technical Support Center, Operational Support Center and the Emergency Operations Facility).

2. Coordinate technical assistance for remedial actions to mitigate circumstances surrounding plant operations.

3. Designate individual to communicate with offsite agencies promptly. Approve all information released via the emergency notification form. Approval (signature) of contents of message form may not be delegated to others in the emergency organization.

4. Initiate emergency actions within the provisions of the Oconee Nuclear Site Emergency Plan.

5. Classify emergency events. Escalate/de-escalate or terminate from an emergency status. Responsibility may not be delegated.

6. Make senior technical and management staff available onsite for consultation with NRC and State on periodic basis if EOF has not been activated.

7. Coordinate all emergency actions concerning the technical aspects of the corrective actions taken within the Technical Support Center.

8. Evacuate all non-essential personnel on site if a radiological emergency exists. Be aware of exposure guidelines of personnel.

9. Recommend protective action guides for the safety and welfare of the public to the appropriate offsite agency if the Emergency Operations Facility/EOF Director is not in a position to do so. This authority may not be delegated.

10. Authorize exposures in excess of routine yearly exposure limits for lifesaving and equipment repair missions in accordance with RP/0/B/1000/011. This responsibility can be delegated to the RP Manager in the OSC.

FIGURE B-6
OCONEE NUCLEAR STATION
EMERGENCY OPERATIONS FACILITY DIRECTOR

Duties and Responsibilities:

1. Overall Management of the offsite emergency response activities of Duke Energy (Oconee Nuclear Site).

2. Recommend protective action guides for the safety and welfare of the public to the appropriate offsite agency. This authority may not be delegated.

3. Approve all information released via the emergency notification form. Approval (signature) of contents of message form may not be delegated to others in the emergency organization.

4. Coordination with federal, state and local government agencies.

5. Provide approval of news releases if Public Spokesperson is unavailable.

FIGURE B-8a
OCONEE NUCLEAR STATION
MINIMUM ON-SHIFT STAFFING LEVELS

Functional Area	Major Tasks	Emergency Positions	Shift Staffing
1. Plant Operations and Assessment of Operational Aspects (a)	--	CR Supervisor (SRO) Control Room Operator (RO) Non-Licensed Operator (NLO)	3 6 3
2. Emergency Direction and Control	Command and Control	Ops Shift Manager	1
3. Notification & Communication	Licensee	Operator (SRO/RO/NLO)	1[(b)]
	Local/ State	SRO	1
	Federal	Operator (SRO/RO/NLO)	1[(b)]
4. Radiological Assessment	Dose Assessment	RP Qualified Individual	1
	In-plant Surveys	RP Qualified Individual	1
	Onsite Surveys	RP Qualified Individual	1
	Chemistry	Chemistry Technician	1
5. Plant System Engineering, Repair, and Corrective Actions	Tech Support – OPs	Shift Technical Advisor	1
	– Core Damage	Shift Technical Advisor	1[(b)]
	Repair and Corrective Actions	Mechanical Maintenance IAE Maintenance	2 2
6. In-Plant PAs	Radiation Protection (such as access control, job coverage and personnel monitoring)	RP Qualified Individual	2[(b)]
7. Fire Fighting (c)	--	Fire Brigade Lead (SRO/NLO) Fire Brigade Member (NLO) Fire Brigade Member	1 4 5[(b,c)]
8. 1st Aid and Rescue	--	MERT (d)	2
9. Site Access Control and Accountability	Security & Accountability	SAS Operator Security Personnel	1 (e)
		Minimum # of Personnel:	**31**

(a) The Control Room staff complement is reflective of 3 Units in operation.

(b) May be performed by an individual filling another position provided they are qualified to do the collateral function.

(c) The Fire Brigade requirement of ten members is met by using five personnel from Operations (including the Fire Brigade Leader) and five personnel from either SPOC, Radiation Protection, Chemistry or Security (SLC 16.13.1).

(d) The Medical Emergency Response Team (MERT) can be filled by any qualified technician.

(e) Per Duke Energy ONS Security Plan.

FIGURE B-8b
OCONEE NUCLEAR STATION
MINIMUM AUGMENTED ERO STAFFING LEVELS

MAJOR FUNCTIONAL AREA	MAJOR TASKS	POSITION TITLE OR EXPERTISE	CAPABILITY FOR ADDITIONS* WITHIN 45 MINUTES	CAPABILITY FOR ADDITIONS* WITHIN 75 MINUTES
Emergency Director and Control (Emergency. Coordinator) ***		Station Manager	—	1
Notification/Communication	Notify Company Personnel, State, County, Federal Agencies and maintain communication	State Communicators		2
EOF/Radiological Accident Assessment and Offsite Agency Support	EOF Director (Protective Action Recommendation, Offsite Agency Interface, ENF approval)	DPC Senior Manager	—	1
	EOF Plant Assessment	Accident Assessment Manager	—	1
Dose Assessment and Protective Action Recommendations	EOF Offsite Dose Assessment/ Protective Action Recommendations	Radiological Assessment Manager	—	1
Offsite Notifications	Offsite Agency Notifications	Offsite Agency Communicator	—	1
			—	1
	EOF Access Control	Electronic Card Reader	—	#
	TSC Dose Assessment/Protective Action Recommendations	Radiological Assessment	—	1
	Offsite Surveys	Field Monitoring Teams (2)		4 ****
	Onsite Surveys (Out-of-Plant)		1	1
	In-Plant Surveys	RP Qualified Individuals	1	1
	Chemistry/Radio Chemistry	Rad/Chem Technician	—	1
Plant System Engineering, Repair and Corrective Actions	Technical Support	Core/Thermal Hydraulics	—	1
		Electrical	—	1
		Mechanical	—	1
	Repair and Corrective Actions	Mechanical Maintenance	—	1
		Rad/Waste Operator	—	1
		I&E Technician	—	2
Protective Actions (In-Plant)	Radiation Protection A. Access Control B. RP Coverage for Repair Corrective Actions, Search and Rescue, First Aid & Firefighting C. Personnel Monitoring D. Dosimetry E. On-Shift Dose Assessment	RP Qualified Individuals	—	4
Firefighting	—	Fire Brigade		Local Support
Rescue Operations & First-Aid	—	MERT Team		Local Support

FIGURE B-8b
OCONEE NUCLEAR STATION
MINIMUM STAFFING LEVELS

* Consideration is given to the fact that many of the Oconee Nuclear Site Emergency Response Organization personnel do not live within a radius of the station which will allow a response time of 30 minutes or less under ideal conditions. Factors such as weather conditions, road capacity and traffic density, and the distance to travel from residence to the emergency response facility, indicate a realistic response time from a few minutes to 1 hour and 15 minutes for most employees. Consideration is also given to personnel on shift who are qualified and sufficient in number to handle any emergency condition until response personnel begin to arrive on site.

*** Management of the Offsite Emergency Response will be assumed by the EOF Director when the Emergency Operations Facility is activated.

Management of the Onsite Emergency Response is assumed by the Station Manager/alternate acting as the Emergency Coordinator when the Technical Support Center and Operational Support Centers are activated.

**** The Field Monitoring Teams will initially report to the Body Burden Analysis (BBA) Room. If needed, the Field Monitoring Teams will dispatch from the Body Burden Analysis (BBA) Room. Once the Emergency Operations Facility (EOF) Field Monitoring Coordinator is ready he/she will assume control of the Field Monitoring Teams. A FMT consists of one RP qualified individual and one vehicle driver.

\# An electronic card reader in conjunction with a posted building security officer fulfills the function for controlling access to the EOF during emergencies.

FIGURE B-9
OCONEE NUCLEAR STATION
MINIMUM STAFFING REQUIREMENTS

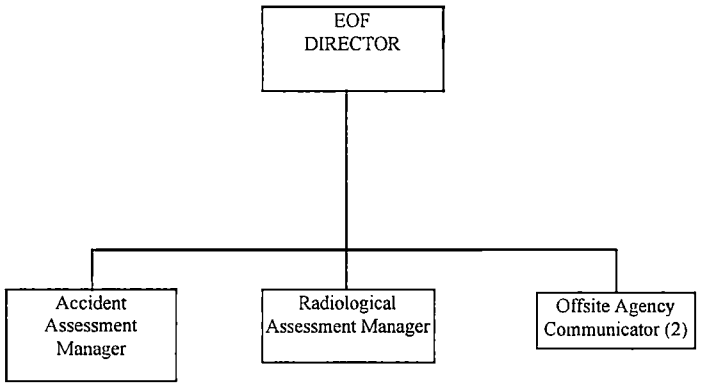


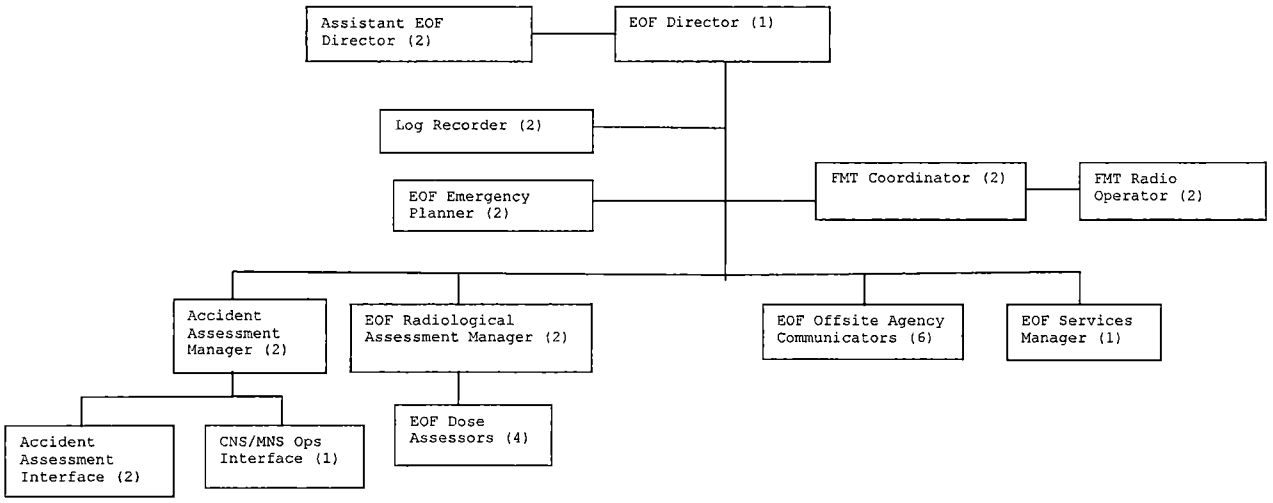
FIGURE B-10
OCONEE NUCLEAR STATION
ONSITE EMERGENCY RESPONSE DUTIES

RADIATION PROTECTION	CHEMISTRY	MAINTENANCE	OPERATIONS	WORK CONTROL	BUSINESS GROUP
Onsite Monitoring	Post-accident liquid sampling	Repair/calibration of electrical and mechanical equipment	Plant Operations	OSC Coordination	Provide personnel for field monitoring teams
Initial dose assessment	Chemistry analysis	Staff OSC with onshift personnel	Accident assessment	Recovery implementation	
Decontamination		Augment OSC with additional personnel	Safe shut-down of reactor	Provide personnel for field monitoring teams	
Post-accident gaseous sampling			Liaison with OSC		
Dose Control			Fire brigade response		
Provide personnel for field monitoring teams			Initial Emergency Management		
Evacuation coordination			NRC Communications		
RP support for work tasks in the field			Fire Support		
			Tank Farm Operation		
			Radwaste Operation		

FIGURE B-10
OCONEE NUCLEAR STATION
ONSITE EMERGENCY RESPONSE DUTIES

SAFETY ASSURANCE	ENGINEERING	SECURITY	SAFETY	NUCLEAR SUPPLY CHAIN SITE SERVICES GROUP
	TSC LOG	ACCESS & CONTROL		COMMUNICATIONS EQUIPMENT
OFF SITE COMMUNICATIONS	TSC/OSC LIAISON TECHNICAL ASSISTANT	EVACUATION COORDINATION		SUPPLY/PARTS
ASSIST WITH ACCOUNTABILITY REPORTING	ENGINEERING SUPPORT	MEDICAL (MERT)	PERSONNEL SAFETY	HEAVY EQUIPMENT OPERATORS
ASSIST WITH EVACUATION	LIAISON WITH CORPORATE ACCIDENT ASSESSMENT GROUP			COMMISSARY
EMERGENCY PLANNING	TSC STATUS BOARDS			

FIGURE B-11
OCONEE NUCLEAR STATION
Common EOF - Multi-Site Event Staffing



1. Notification Devices activated for second unit - all call response
2. Assistant EOF Director assumes responsibility as lead manager for designated Site
3. Additional Log Keeper retained to support 2nd Site
4. Additional Accident Assessment Manager retained to support 2nd Site
5. Additional Dose Assessor retained to support 2nd Site
6. Additional FMT Coordinator retained to support 2nd Site
7. Additional FMT Radio Operator retained to support 2nd Site
8. Four additional Offsite Communicators as needed to support both Sites
9. Additional Emergency Planner as needed to support 2nd Site
10. Additional Radiological Assessment Manager as needed to support 2nd Site
11. Additional Assistant EOF Director as needed to support 2nd Site
12. Oconee Ops Interface position is staffed in the ONS TSC
13. Additional Accident Assessment Interface as needed to support 2nd Site

Emergency Facilities And Equipment

H.1.a Technical Support Center (TSC)

A Technical Support Center has been designated for the Oconee Nuclear Station in the area known as the Operations Center, together with the nearby offices adjacent to the Control Rooms 1&2 on the fifth floor of the Auxiliary Building. This area has the same ventilation and shielding as the Control Room enabling plant management and supporting technical and engineering personnel to evaluate plant status and support operations in conjunction with the Operational Support Center.

The Technical Support Center has the capability to display and transmit plant status to those individuals who are knowledgeable of and responsible for engineering and management support of the reactor operations in the event of an accident, and those persons who are responsible for the management of the accident. Upon activation, this facility will provide the main communication link between the Plant, Operational Support Center, the Nuclear Regulatory Commission Regional Headquarters, and the Emergency Operations Facility. The Technical Support Center is staffed by plant management and technical personnel.

The Technical Support Center has access to the following capabilities and characteristics: (Figure H-1).

1. Redundant two-way communication with the Control Room, the Emergency Operations Facility and the Nuclear Regulatory Commission Operations Center.

2. Monitoring for direct radiation and airborne radioactive contaminants, with local readout of radiation level and alarms if preset levels are exceeded. Laboratory analysis is required if it becomes necessary to detect radioiodines at concentrations as low as 1.0 E-7 microcurie/cc.

3. Display, printout or trending of comprehensive data necessary to monitor reactor systems status and to evaluate plant system abnormalities; in-plant radiological parameters and meteorological parameters are also available. This capability is provided via each unit's Operator Aid Computer.

   Offsite radiological conditions are provided via radio from the field monitoring teams.

4. Ready access to as-built plant drawings such as general arrangement, flow diagrams, electrical one-lines, instrument details, etc.

5. Habitability during postulated radiological accidents to the same degree as the Control Room.

H.1.b Operational Support Center (OSC)(Figure H-2)

An Operational Support Center has been established in the Operations Center located in the Unit 3 Control Room. Personnel assigned to this support center will include the following:

- Work Control
- Chemistry
- Radiation Protection
- Maintenance
- Operations
- Engineering
- Nuclear Supply Chain
- Security

The Operational Support Center has shielding and ventilation to the same degree as the Control Room. Breathing equipment and protective clothing are available in the Operational Support Center should any craftsman/technician be required to perform a task or function in an area that would require protective clothing and breathing apparatus.

H.1.c Alternate Emergency Response Facility (ERF) (Figure H-14 and H-2A)

An Alternate Technical Support Center has been established at the Oconee Office Building, Room 316. Radio and telephone communications are available to offsite agencies and the NRC to the same extent as the designated TSC.

An Alternate Operational Support Center has been established in the Oconee Office Building, Room 316 A. Communication links are provided for information flow both to the Control Room and Technical Support Center.

H. EMERGENCY FACILITIES AND EQUIPMENT

The Issaqueena Trail Facility (JIC) serves as an alternate response facility that would be accessible even if the site is under threat of or experiencing hostile action, to function as a staging area for augmentation of emergency response staff and having the following characteristics required collectively of the alternate facilities for use when onsite emergency facilities cannot be safely accessed during hostile action:

- The capability for communication with the emergency operations facility, control room, and plant security.
- The capability to perform offsite notifications.
- The capability for engineering assessment activities, including damage control team planning and preparation.

H.2 Emergency Operations Facility (EOF) (Figures H3-A and H3-B)

The Emergency Operations Facility is located at the Charlotte General Office in North Carolina. The facility is located approximately 120 miles from the Oconee Nuclear Station.

The EOF has the following capabilities:

a. The capability for obtaining and displaying plant data and radiological information for each reactor at a nuclear power reactor site and for each nuclear power reactor site that the facility serves.

b. The capability to analyze plant technical information and provide technical briefings on event conditions and prognosis to licensee and offsite response organizations for each reactor at a nuclear power reactor site and for each nuclear power reactor site that the facility serves.

c. The capability to support response to events occurring simultaneously at more than one nuclear power reactor site if the emergency operations facility serves more than one site.

H. EMERGENCY FACILITIES AND EQUIPMENT

Two utility circuits feed Energy Center Phase II where the EOF is located. Primary power to the Energy Center is provided by commercial power. All electrical outlets, as well as lighting fixtures and the wiring closet that supports both the voice and data communications in the Energy Center EOF are on generator backed up power. A loss of commercial power should not impact any of the voice or data communications equipment located in the EOF. All common Duke Energy telecom infrastructures that support EOF functions, including, but not limited to, fiber optic transmission equipment, telephone switching equipment and data network routers, is configured to operate from at least one and usually multiple backup power sources in the event of a loss of commercial power. These backup sources include generator, DC battery and UPS systems. EOF HVAC loads are not backed up.

H.3 County, State Emergency Operations Center

See Oconee County FNF Plan.
See Pickens County, FNF Plan.
See State of South Carolina FNF Plan, Site Specific.

H.4 Activation and Staffing of the Emergency Response Organization

Activation and staffing of the Emergency Response Organization will be in accordance with the emergency action levels and the procedures developed for determining emergency response.

Division/Section Directives describe the Emergency Response Organization. Figures A-2A, A-2B depicts the procedure for recall of the Emergency Organization.

H.5 Monitoring Systems

On Site - If an emergency situation occurs at the plant, plant personnel continually monitor plant parameters with regard to limits and surveillance requirements specified in the appropriate Technical Specifications, Operating Procedures and Emergency Procedures. These parameters will affect the emergency classification and therefore affect decisions implementing specific emergency measures. In addition to monitoring plant parameters, radiological surveys may be used to verify, augment and/or delineate the assessment of the emergency. (Figure H-20).

H.5.a Natural Phenomena Monitors

Natural phenomena instrumentation to monitor wind speed and direction, temperature and vertical temperature gradient (Figure H-4); and seismic activity (Figure H-18).

H.5.b Radiological Monitors (H-5)

Area Radiation Monitoring System

The area radiation monitoring system detectors are located throughout the plant in locations where significant radiation levels may exist, which may change with time and with the operation being performed. They are designed primarily for the protection of personnel performing such operations as routine coolant sampling, refueling, reactor building entry, radioactive waste disposal operations and for certain other operating and maintenance work. The system has sufficient range and flexibility to permit readout during routine operations and during any transient or emergency conditions that may exist. The equipment is self checking for proper operation and alarms both in the local area and in the respective control room. Where necessary or desirable, readout is also provided locally.

Process Radiation Monitoring System

Radiation monitoring of process systems provides early warning of equipment, component, or system malfunctions or potential radiological hazards. The Process Radiation Monitoring System includes alarms, indications, and recording of data in the control rooms. In some cases automatic action is taken upon an alarm condition; in others the alarm serves as a warning to the operator so that manual corrective action can be taken.

Radioactive liquid and gaseous waste effluent are monitored and coordinated by Operations and controlled to assure that radioactivity released does not exceed 10 CFR 20 limits for the plant as a whole.

H. EMERGENCY FACILITIES AND EQUIPMENT

Personnel Monitoring System

Personnel monitoring equipment consisting of film badges and/or their equivalent (thermo-luminescent dosimeters, TLD's), are assigned by the Radiation Protection Section and worn by all personnel at Oconee whose job involves significant levels of radiation exposure as defined in 10 CFR 20. In addition, pocket chambers, electronic dosimeters, self-reading dosimeters, pocket high radiation alarms, wrist badges, and/or finger tabs are readily available for use by those persons who ordinarily work in the Controlled Area or whose job requires frequent access to this area.

Portable Monitors - sufficient numbers are available for use in assessing radiological conditions. (Figure H-6).

Sampling Equipment - sufficient numbers are available for use in assessing radiological conditions. (Figure H-7).

H.5.c Process Monitors - Non-radiological Monitoring

Non-radiological monitoring capabilities include reactor coolant system pressure, temperatures, flows, and water level for detection of inadequate core cooling. Containment pressure, temperature, liquid levels, flow rates, and status of equipment components are monitored to assess containment integrity.

H.5.d Fire and Combustion products detectors - (Figure H-8).

H.6 Offsite Monitoring and Analysis for Emergency Response

H.6.a Natural-Phenomena Monitors

Facilities and equipment include two onsite meteorological towers. Also, an agreement has been established with the Greenville-Spartanburg National Weather service to provide meteorological information should our system become inoperable.

H.6.b Radiological monitors for emergency environmental monitoring are provided in emergency kits. The established environmental monitoring network and sampling equipment in the surrounding area are also available to provide emergency assessment data.

The existing radiological monitoring program will provide base line information as well as in-place monitoring for early assessment data. (Figure A) (H-9 and H-10).

H. EMERGENCY FACILITIES AND EQUIPMENT

Normal environmental monitoring equipment includes radioiodine and particulate continuous air samplers and thermo-luminescent dosimeters, located and collected according to pre-established criteria. Environmental monitoring will be expanded as necessary during an emergency situation in accordance with offsite monitoring procedures.

H.6.c Laboratory Facilities - Include mobile emergency monitoring capabilities available through the S.C. Department of Health and Environmental Control, Bureau of Solid and Hazardous Waste Management and the DOE Radiological Assistance Team. In addition, Oconee Nuclear Station (ONS) has emergency vehicles for mobile assessment purposes. Fixed facilities are available for gross counting and spectral analysis in the ONS counting laboratory (Figure H-11) and at the Duke Energy Environmental Laboratory near the McGuire Nuclear Station, Charlotte, North Carolina.

Should the plant lose the capability to use the count room onsite, samples can be counted at the backup count room or in one of the mobile assessment field monitoring vans. Portable equipment would be relocated to this area. (Figure H-3)

H.7 Offsite radiological monitoring equipment is located in the storage area outside the protected area. Emergency kits are available for off-site monitoring teams who would be monitoring for radiation offsite. (Figure H-12).

H.8 Meteorological Instrumentation

A primary and one auxiliary meteorological tower provides the basic parameters on display in the Control Room. (Figure H-4 shows the meteorological equipment.)

Meteorological measurement equipment meets the criteria of the milestones addressed in Appendix 2 of NUREG 0654 and Proposed Revision 1 to Regulatory Guide 1.23.

An operable dose calculation methodology is in use in the Control Room, Technical Support Center and the Emergency Operations Facility.

The dose assessment methodology for the Oconee Nuclear Station consists of calculations for three separate source terms. The first source term is based on the activity that has been or is actually being released through the unit vent; the second source term is based on a potential release using the reactor building dose rate and design basis assumptions for containment leakage; the third source term is based on the activity that has been or is actually being released through the steam relief valves.

H. EMERGENCY FACILITIES AND EQUIPMENT

The release rate is calculated for each source term using relative atmospheric dispersion factors calculated by the meteorological model and either actual sample data or radiation monitor readings. These release rates are then added together and used to calculate the dose rate or a projected dose over the duration of the release or over 4 hours if release duration is unknown at 1, 2, 5 and 10 miles downwind from the plant.

These dose assessment methods provide the capability to calculate the dose from actual or potential releases following an accident. A fifty-year committed dose equivalent (CDE) to the thyroid and a total effective dose equivalent (TEDE) from exposure to a semi-infinite cloud and a four-day ground shine as applicable are determined. The dose conversion factors are derived from EPA-400. Near real time radiation monitor readings, sample data, and meteorological data are combined to provide timely, realistic dose calculations. This model will provide the capability to assess and monitor actual or potential offsite consequences of a radiological emergency condition.

Direct telephone access to the person responsible for making offsite dose calculations is available to the Nuclear Regulatory Commission through the use of the NRC Health Physics Network line. The physical location of this person is in the Emergency Operations Facility.

H.9 Operational Support Center - Emergency Supplies

The Operational Support Center will have the same shielding, and ventilation as the Control Room. Protective clothing and breathing equipment are available to the personnel assembled in these areas. (See Figures H-13, H-14, H-17)

H.10 Inspection and Inventory of Emergency Equipment and Supplies

All emergency equipment designated by the Oconee Nuclear Station Emergency Plan shall be inventoried and inspected on a quarterly basis or in agreement with established procedures. Supplies will be inventoried/replaced after each drill and/or exercise or actual emergency where supplies might have been used.

Calibration of any/all emergency equipment shall be at the intervals recommended by the supplier of the equipment.

H. EMERGENCY FACILITIES AND EQUIPMENT

H.11 Identification of Emergency Kits

Emergency kits are located in various locations. See figures below and procedure for specific locations.

Protective Equipment Kits - Figures H-13, H-14, H-17
Communications Equipment - Figures H-12, H-16
Radiological Monitoring Equipment - Figures H-12, H-16, H-17
Emergency Supplies - Figures H-16, Figure H-17
Emergency Medical Supplies - L-1, L-2, L-3
Decontamination Supplies - K-3
Spill Cleanup Equipment/Supplies - H-19

H.12 Field Monitoring Data Collection

The Emergency Operations Facility has been designated as the central point for the receipt and analysis of all field monitoring data and coordination of sample media. The Radiological Assessment Manager at the Emergency Operations Facility will be responsible for the coordination efforts.

FIGURE H-1

OCONEE NUCLEAR STATION
TYPICAL TECHNICAL SUPPORT CENTER (TSC)
PRIMARY LOCATION
UNIT 1&2 OPS CENTER

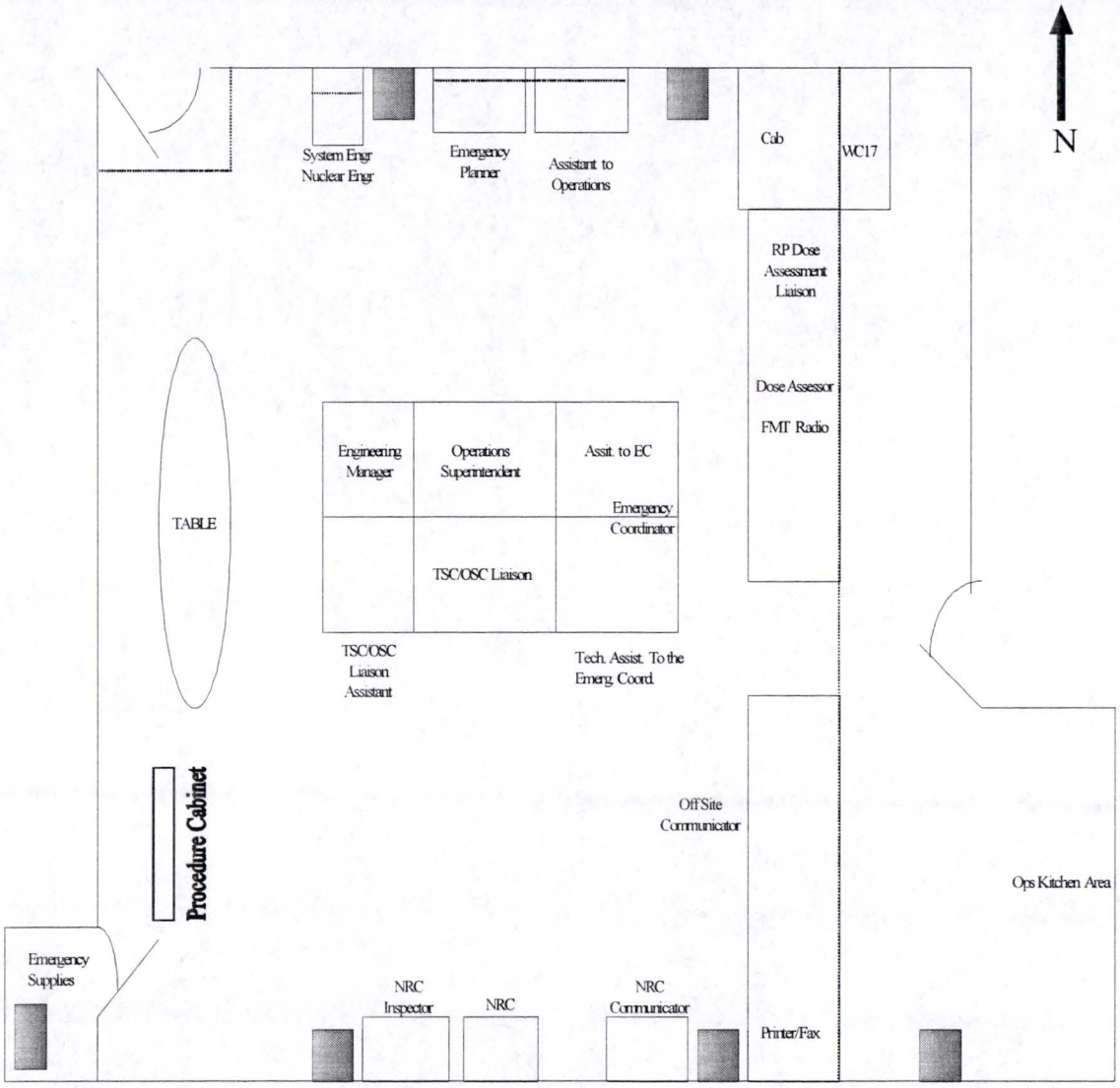
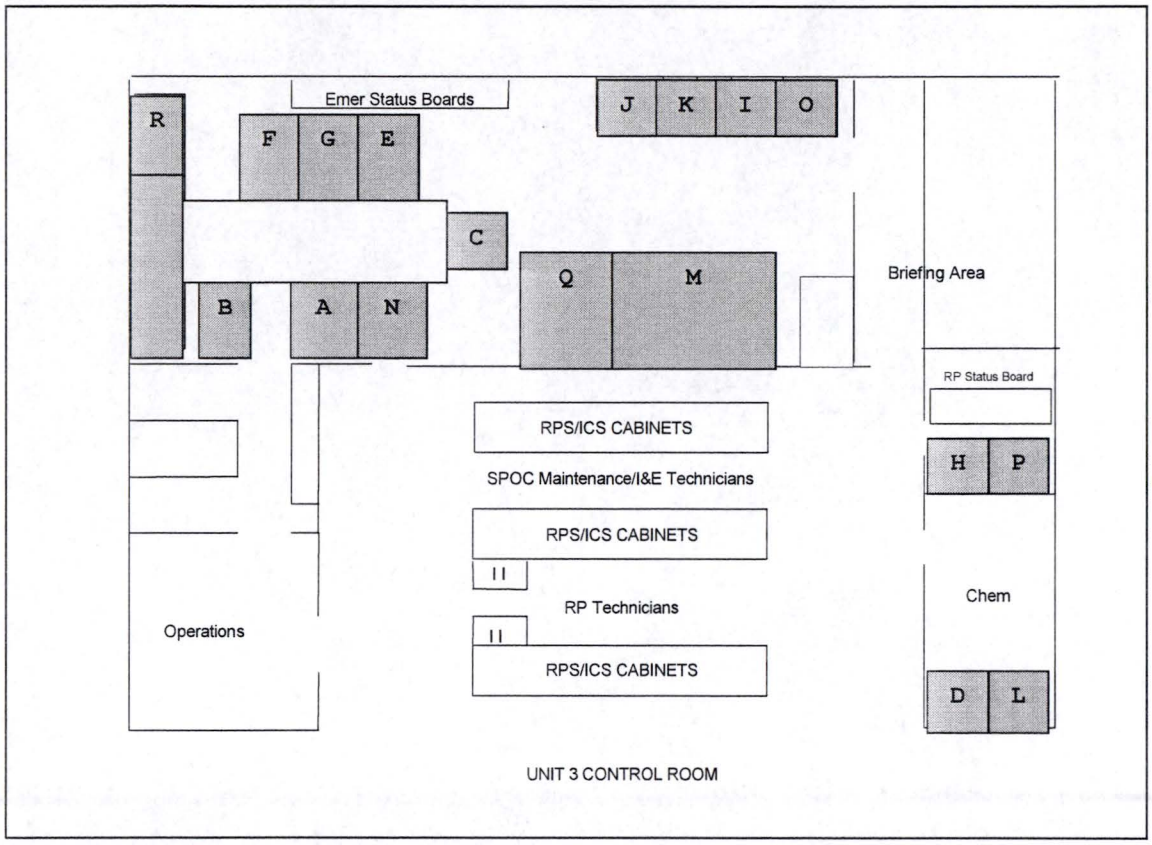


FIGURE H-1A

NO LONGER USED

FIGURE H-2

OCONEE NUCLEAR STATION
TYPICAL OPERATIONAL SUPPORT CENTER (OSC)
PRIMARY LOCATION
UNIT 3 OPERATONS CENTER



A.	OSC Manager	J.	Electrical Engineering
B.	Ops Liaison	K.	Maintenance Supervisor (SPOC)
C.	RP Manager	L.	Chemistry Supervisor
D.	Chemistry Shift	M.	FIN24
E.	Technical Assistant I	N.	Technical Assistant II
F.	Chemistry Manager	O.	Nuclear Supply Chain Liaison
G.	Maintenance Manager	P.	RP Shift
H.	RP Supv	Q.	Assistant to RP Mgr.
I.	SPOC/FIN24	R.	Security Liaison

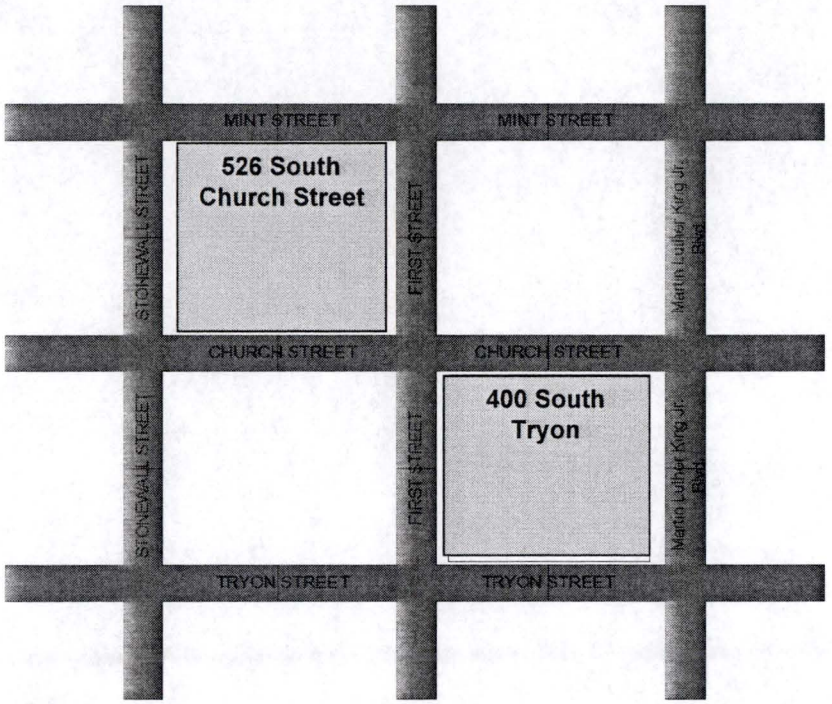
FIGURE H-2A

NO LONGER USED

FIGURE H-3A

DUKE ENERGY
OCONEE NUCLEAR STATION

CHARLOTTE EOF
GENERAL OFFICE BUILDING LAYOUT – CHARLOTTE, NC



The EOF is on the 3rd Floor of the Energy Center.

FIGURE H-3B
DUKE ENERGY
OCONEE NUCLEAR STATION
CHARLOTTE EMERGENCY OPERATIONS FACILITY LAYOUT

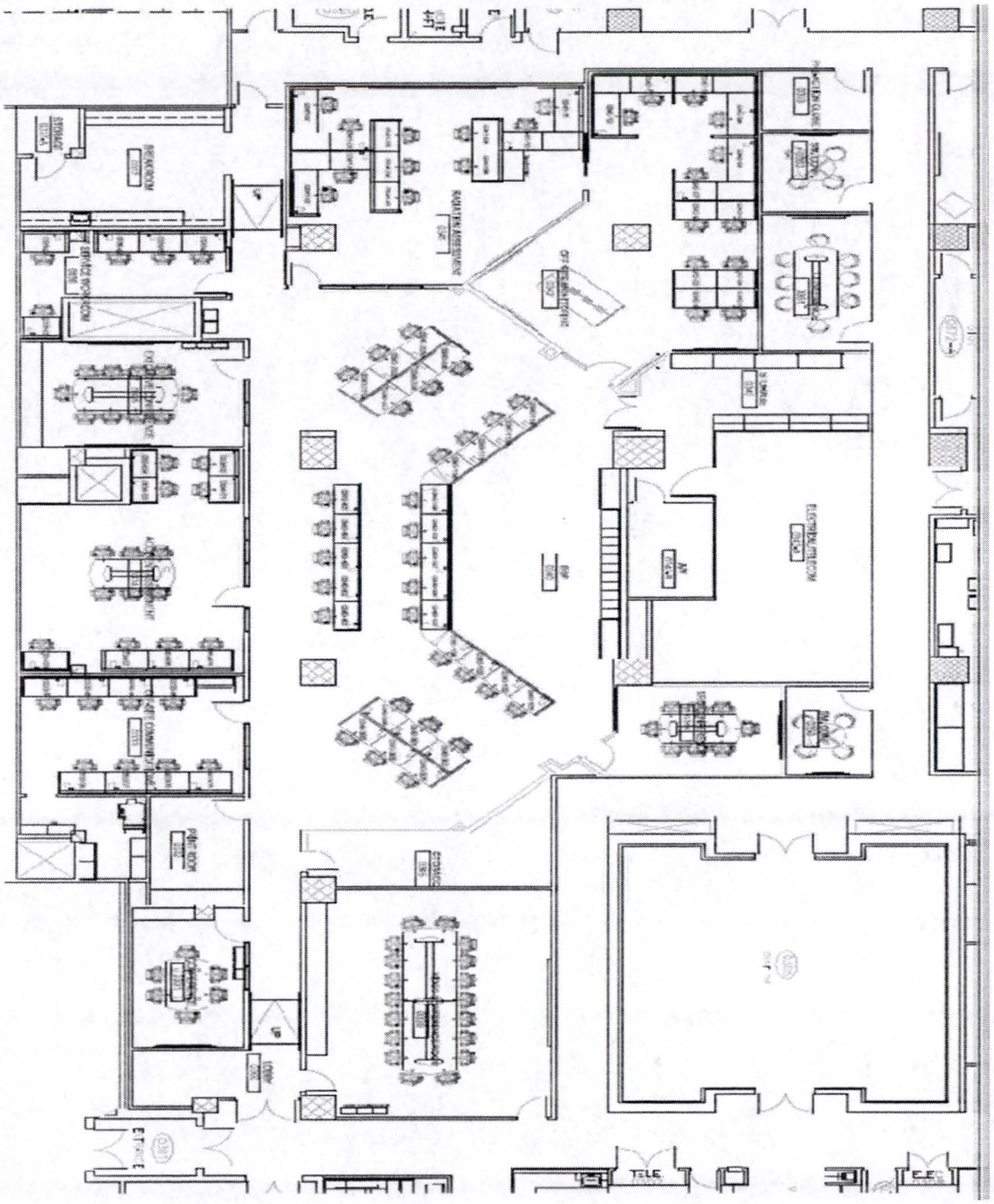


FIGURE H-3C

DUKE ENERGY
OCONEE NUCLEAR STATION

TYPICAL OCONEE JIC SET UP
(Alternate Emergency Response Facility)

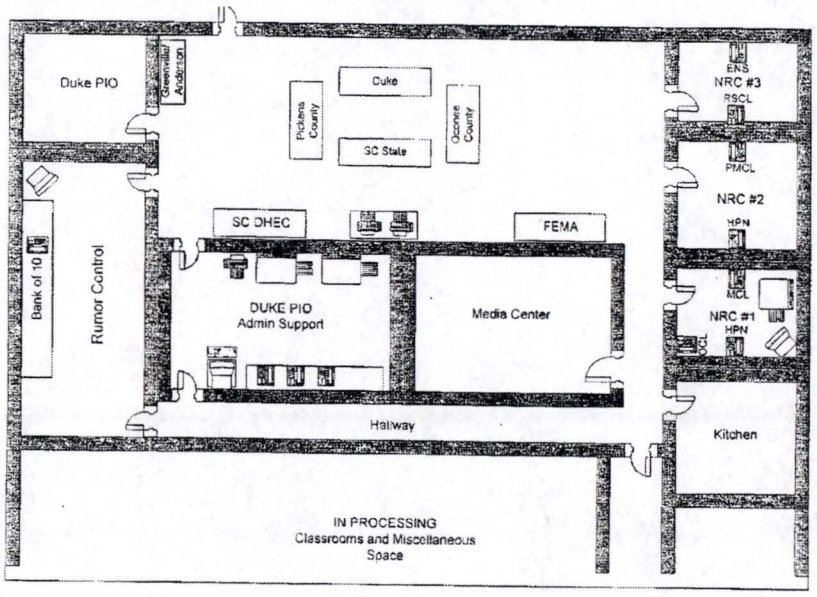


FIGURE H-3D

DUKE ENERGY
OCONEE NUCLEAR STATION

OCONEE MEDIA CENTER

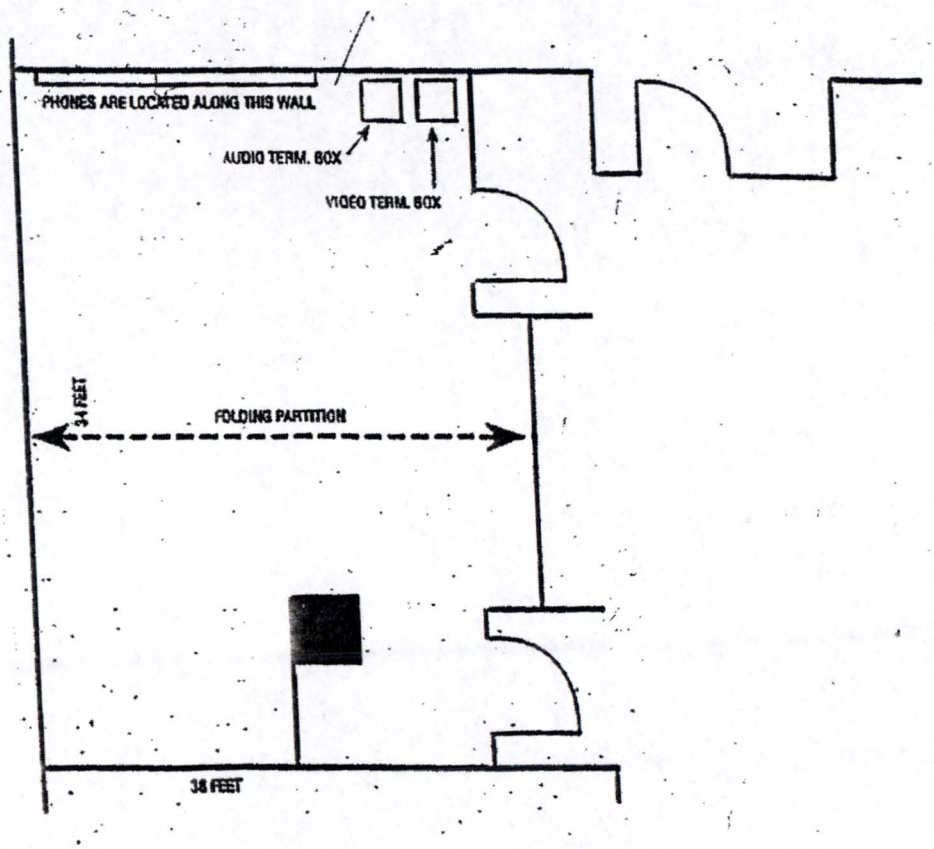


FIGURE H-3E

DUKE ENERGY
OCONEE NUCLEAR STATION

OCONEE JIC GENERAL LAYOUT

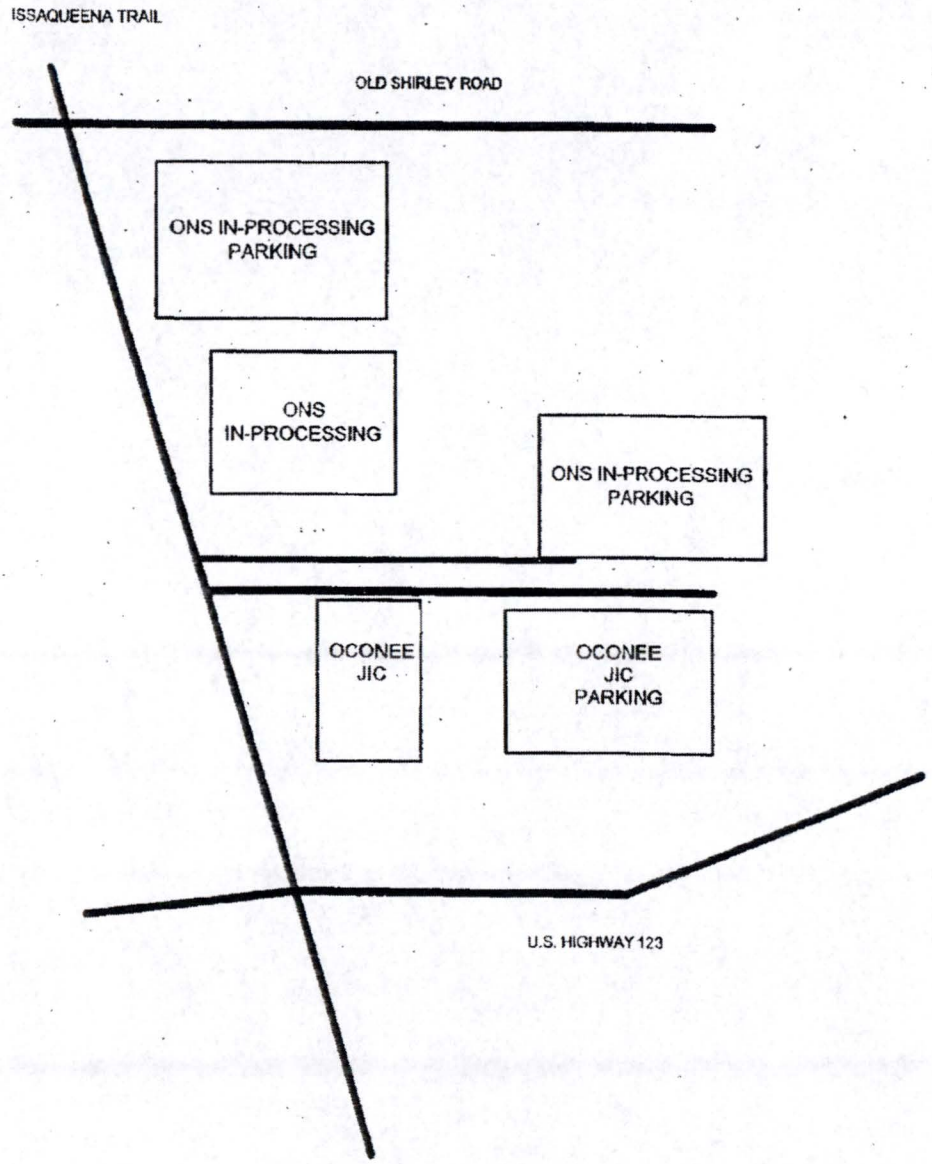


FIGURE H-3F

DUKE ENERGY
OCONEE NUCLEAR STATION

OCONEE BACKUP COUNT ROOM LOCATION
ONS ADMIN BUILDING

FIGURE H-4

DUKE ENERGY
OCONEE NUCLEAR STATION

METEOROLOGY EQUIPMENT

Wind Speed Monitoring Systems

Wind Direction Monitoring Systems

Platinum (RTD) T Delta or T/ΔT Monitoring System

Precipitation Monitoring System

NOTE: The Meteorological Monitoring System monitors and records continuous data for upper and lower levels of wind speed and direction, ambient air temperature and temperature differential at Site #1 (Northwest Met Tower). Wind speed, wind direction and precipitation is recorded at Site #2 (Keowee River Tower). All data points are included on each of the Units OAC computers where the data is averaged over a 15 minute period of time, except for precipitation.

IP/0/B/1601/003 (Meteorological Equipment Checks) gives range, accuracy and location.

FIGURE H-5

DUKE ENERGY
OCONEE NUCLEAR STATION

RADIATION INDICATING ALARMS (RIA)

RIA#	UNIT#	TYPE	RANGE	FUNCTION	LOCATION	CLASS
1	1,3	GM	.1 -1E4mRad/hr	Control Room	Control Room	Area
PAM*	1,2,3	GM	.1 -1E4mRad/hr	Main Bridge	Reactor Building	Area
PAM*	1,2,3	GM	.1 -1E4mRad/hr	Aux. Bridge	Reactor Building	Area
3	1,2,3	GM, IC	.1 -1E7mRad/hr	Refuel Canal	Transfer Canal	Area
4	1,2,3	GM, IC	.1 -1E7mRad/hr	RB Entrance	Personnel Hatch	Area
5	1,2,3	GM	.1 -1E4mRad/hr	Incore Tank	Outside Incore Tk Hatch	Area
PAM*	1,3	GM	.1 -1E4mRad/hr	Spent Fuel	SF Bridge	Area
6	1,3	GM, IC	.1 -1E7mRad/hr	Spent Fuel Area/Pool	SF Pool Area	Area
7	1	GM	.1 -1E4mRad/hr	Hot Machine Shop	East Wall	Area
8	1	GM	.1 -1E4mRad/hr	Hot Lab/ Chemistry	Hot Chem. Lab	Area
10	1,3	GM	.1 -1E4mRad/hr	Sample Hood/Primary	Primary Sample hood	Area
11	1,3	GM	.1 -1E4mRad/hr	Corridor 796'(3rd Level)	Unit 1/2 Change Room, Unit 3 Change Room	Area
12	1,3	GM	.1 -1E4mRad/hr	Chem Addition	Unit 1/2/3 Mix Tank	Area
13	1,3	GM	.1 -1E4mRad/hr	Waste Disposal Sink	Waste disposal Tk	Area
15	1,3	GM, IC	.1 -1E7mRad/hr	HPI	HPI Rooms	Area
16	1,3	GM, IC	.01 -1E7mRad/hr	"A" Main Steam Line	"A" Main Steam Lines	Area
17	1,3	GM, IC	.01 -1E7mRad/hr	"B" Main Steam Line	"B" Main Steam Lines	Area
31	1	NaI	10 -1E7cpm	LPI cooler LPSW Discharge	Turbine Building Basement	Effl

Figure H-5
DUKE ENERGY
OCONEE NUCLEAR STATION

RADIATION INDICATING ALARMS (RIA)

RIA#	UNIT#	TYPE	RANGE	FUNCTION	LOCATION	CLASS
32	1	P.Beta	10 - 1E7cpm	Aux. Bldg. Gas	AB-1 SF Resin Tank	Area
32	3	P.Beta	10 - 1E7cpm	Aux. Bldg. Gas	AB-2 Elevator Lobby	Area
33		NaI	10 - 1E7cpm	Normal LWD	Radwaste Facility	Effl
35	1,2,3	NaI	10 - 1E7cpm	LPSW Disch. Aux Building	Turbine Building Basement	Effl
37	1,3	P.Beta	10 - 1E7cpm	Normal GWD	Purge Equipment or Pen Room near elevator	Effl
38	1,3	GM	10 - 1E7cpm	High GWD	Purge Equipment or Pen Room near elevator	Effl
39	1,3	P.Beta	10 - 1E7cpm	CR-Gas	6th Fl. behind Em. Air Booster Pumps	Area
40	1,2,3	P.Beta	10 - 1E7cpm	Air ejector off gas	Purge Equip. room	Effl
41	1,3	P.Beta	10 - 1E7cpm	SF Bldg. Gas	Purge Equip. room	Area
42	1,3	NaI	10 - 1E7cpm	RCW return	Behind backwash pumps	Sys
43	1,2,3	P.Beta	10 - 1E7cpm	Unit vent particulates	Purge Equip. room	Effl
44	1,2,3	NaI	10 - 1E7cpm	Unit vent iodine	Purge Equip. room	Effl
45	1,2,3	P.Beta	10 - 1E7cpm	Unit vent gas normal	Purge Equip. room	Effl
46	1,2,3	CdTe	10 - 1E7cpm	Unit vent gas high	Purge Equip. room	Effl
47	1,2,3	P.Beta	10 - 1E7cpm	RB particulate	Purge Equip. room	Effl
48	1,2,3	NaI	10 - 1E7cpm	RB iodine	Purge Equip. room	Effl
49	1,2,3	P.Beta	10 - 1E7cpm	RB gas normal	Purge Equip. room	Effl
49A	1,2,3	CdTe	10 - 1E7cpm	RB gas high	Purge Equip. room	Effl
50	1,2,3	NaI	10 - 1E7cpm	Component Cooling	AB-1	Sys

Figure H-5
DUKE ENERGY
OCONEE NUCLEAR STATION

RADIATION INDICATING ALARMS (RIA)

RIA#	UNIT#	TYPE	RANGE	FUNCTION	LOCATION	CLASS
53	IB	P.Beta	10 - 1E7cpm	Interim Bldg. Gas	Interim Bldg.	Effl
54	1,3	NaI	10-1E7cpm	TB Sump	TB Basement	Effl
56	1,2,3	IC	1-1E8Rad/hr	Vent Stack Effluent	Vent Stack (Midway)	Effl
57	1,2,3	IC	1 -1E8Rad/hr	Containment High range monitor	Reactor Bldg. Penetration	Area
58	1,2,3	IC	1 -1E8Rad/hr	Containment High range monitor	Reactor Bldg. Penetration	Area

GM = Geiger Mueller

IC = Ion Chamber

PAM = Portable Area Monitor
* Portable area monitors do not have assigned RIA numbers and are local readout only.

IB = Interim Building

FIGURE H-6

DUKE ENERGY
OCONEE NUCLEAR STATION

PORTABLE SURVEY INSTRUMENTS

INSTRUMENT TYPE	RESPONSE TIME	DETECTOR TYPE	RANGES	RADIATION DETECTED	TUBE SATURATION	ADDITIONAL INFORMATION
Ludlum 3	4-22 seconds	Halogen quenched GM	X0.1 = 0-0.2 mR/hr X1.0 = 0-2.0 mR/hr X10 = 0-20 mR/hr X100 = 0-200 mR/hr	Beta & Gamma	Indicates offscale	Typically 1200 cpm per mR/hr. Speaker indication. Contains battery check position.
Eberline RM14	2.2 - 22 seconds variable	Halogen quenched GM	X1=0-500 cpm X10=0-5000 cpm X100=0-50000 cpm	Beta & Gamma	Indicates offscale	Has alarm setting. Speaker indication. 50 hr operation on fully charged battery.
MGPI Telepole	2-30 seconds variable	Two GM tubes 1 low range 1 high range	0.05 mR/hr - 1000 R/hr	Gamma	Indicates over range	Automatic switching between GM tubes. 11' extension probe. Battery self check.
Eberline RO20	5 seconds	Ion-chamber Air filled. Vented to atmosphere	0-50Rad/hr.	Beta & Gamma	Indicates offscale	Has battery check information
Eberline RO7	Variable	Air filled ion chamber	Med range: 0.1-199.9 Rad/hr Hi range: 0-01 - 19.900 Rad/hr	Beta & Gamma	Indicates over range	Digital ion chamber with cables to extend detection up to 60' away or under water.

FIGURE H-6

DUKE ENERGY
OCONEE NUCLEAR STATION

PORTABLE SURVEY INSTRUMENTS

Instrument Type	Response Time	Detector Type	Ranges	Radiation Detected	Tube Saturation	Additional Information
Ludlum-12	4-22 seconds	Cadmium loaded polyethylene sphere with He tube in center. Tube operates in proportional region	0 - 100,000 mRad/hr	Neutron	Rejects Gamma up to 10 Rad/hr.	Detector can be attached or moved from meter.
AMP-100	Variable	Energy Compensated GM tube	0 - 1000 R/hr	Gamma	Over range alarm	Can be used with variable length of cable.
AMP-200	Variable	Energy Compensated GM tube	1 - 10,000 R/hr	Gamma	Over range alarm	Can be used with variable length of cable.
ESP 2	Variable	Sodium Iodide Scintillator	Variable	Gamma	Over range alarm	Single channel analyzer w/pulse height analysis Nal detectors

FIGURE H-7

DUKE ENERGY
OCONEE NUCLEAR STATION

AIR SAMPLERS

INSTRUMENT NAME	EXPECTED FLOW RATE	AIR PUMP TYPE	MAXIMUM LENGTH OF OPERATION
HD29A	2 CFM	Centrifugal Carbon Vane Pump air-cooled motor	Continuous, constant flow
H-809V	2 CFM	Two-stage turbine blower air-cooled motor	15 minutes
RAP-1	2 CFM	Oil Free, Carbon Vane	Continuous, constant flow

FIGURE H-8

DUKE ENERGY
OCONEE NUCLEAR STATION

FIRE AND COMBUSTION PRODUCTS AND DETECTORS

FIRE DETECTION SYSTEM - Inaccessible Detectors

The purpose of this fire detection system is to detect visible and/or invisible smoke or other products of combustion in any space covered by detectors.

The principal parts of this system; Fire indicating unit, zone indicating units and detectors, with up to 8 zone indicating units-for each fire Indicating unit. Up to 4 detectors circuits (zones) on each zone indicating unit. Each detector circuit (zone) has up to 12 detectors.

When products of combustion are detected a flashing lamp on the detector base is turned on. The zone lamp for the zone covering that detector will come on. The Red "Alarm" lamp on the fire indicating unit will come on. The statalarm in the control room will come on.

In the event of a failure in the system which makes the system inoperative, an amber "Trouble" lamp will come on, a buzzer will sound and the statalarm will come on.

FIRE DETECTION SYSTEM - Accessible Detectors

The purpose of this fire detection system is to detect visible and/or invisible smoke or other products of combustion in any space covered by detectors.

The principal parts of this system include; Fire indicating unit, Zone indication units and detectors, with up to 8 zone indicating units for each fire indicating unit. Up to 4 detector circuits (zones) are on each zone indicating unit. Each detector circuit (zone) has up to 99 detectors.

When products of combustion are detected a red "LED" on the Honeywell detector will come on. The zone lamp for that detector will come on. The Red "Alarm" lamp on the fire indicating unit will come on. The statalarm in the control room will come on.

In the event of a failure in the system which makes the system inoperative, an amber "Trouble" lamp on the Honeywell will come on, a buzzer will sound and the statalarm will come on.

FIGURE H-9

DUKE ENERGY
OCONEE NUCLEAR STATION

NORMAL ENVIRONMENTAL MONITORING PROGRAM

ONSITE/OFFSITE TLD LOCATIONS

See: Oconee Offsite Dose Calculation Manual

FIGURE H-10

DUKE ENERGY
OCONEE NUCLEAR STATION

NORMAL ENVIRONMENTAL MONITORING PROGRAM

AIR SAMPLE LOCATIONS

OFFSITE LOCATIONS

See: Oconee Offsite Dose Calculation Manual

FIGURE H-11

DUKE ENERGY
OCONEE NUCLEAR STATION

COUNT ROOM EQUIPMENT (ONSITE)

INSTRUMENT TYPE	DESCRIPTION
Gamma Spectroscopy System	Computer based gamma spectroscopy system with solid state germanium detectors for analysis of various sample media.
Body Burden Analyzer and Stand-up Total Body Analyzer	Computer based gamma spectroscopy system with three sodium detectors mounted in a shielded chair which can analyze the thyroid, lungs, and lower torso simultaneously, along with a stand-up total body analyzer using large sodium iodine detectors.
Automatic Smear Counter	An automatic smear counter using a GM detector which performs beta only analyses on up to 50 smears.
Liquid Scintillator	Multiple sample liquid scintillation analysis systems that detect and quantify H-3 and gross beta using a computer to correct for quench and activity.
Alpha Scintillator	An automatic smear counter using a zinc sulfide scintillator detector to detect alpha only. Analyzes up to 50 smears/air samples at a time.

FIGURE H-12

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CONTENTS OF EMERGENCY KITS FOR FIELD MONITORING TEAMS

(Location World of Energy)

SEE HP/0/B/1009/001

FIGURE H-13

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EMERGENCY KIT INVENTORY SHEET

Control Room Locations

See HP/0/B/1009/001

FIGURE H-14

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EMERGENCY KIT INVENTORY SHEET

Respiratory Equipment

See HP/0/B/1009/001

FIGURE H-15

DUKE ENERGY
OCONEE NUCLEAR STATION

EMERGENCY SUPPLIES INVENTORY LIST

Technical Support Center

Operational Support Center

Emergency Operation Facility

See PT/0/A/2000/008 and ST/0/A/4600/086

FIGURE H-16

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OCONEE NUCLEAR STATION

EMERGENCY CABINET INVENTORY SHEET

INPLANT SURVEILLANCE EQUIPMENT

(WORLD OF ENERGY)

SEE HP/0/B/1009/001

FIGURE H-17

DUKE ENERGY
OCONEE NUCLEAR STATION

INVENTORY LIST FOR OPERATIONAL SUPPORT CENTER

EMERGENCY CABINET

See HP/0/B/1009/001

FIGURE H-18

DUKE ENERGY
OCONEE NUCLEAR STATION

SEISMIC INSTRUMENTATION PROGRAM

SEISMIC EQUIPMENT	UNIT 1 CABLE ROOM	UNIT 1 TENDON ACCESS GALLERY	UNIT 1 REACTOR BUILDING
Seismic Trigger (1) (Setpoint .05g and actuates a statalarm and computer alarm in Control Room 1 & 3. Also actuates Unit 1 & 2 Events Recorder.		x	
STRONG-MOTION ACCELEROGRAPH SYSTEM. Starter (1) Setpoint .01g for 1 sec will actuate accelerometers and recorders on Control Panel. Also actuates a computer alarm in Control Room 1.		x	
Accelerometers (2) Actuates recorders on Control Panel at .01g for 1 sec		x	x
Recorders (2) Records for 10 additional sec following completion of seismic events up to 30 minutes	x		
Control Panel (1) Event alarm-alarm light turns yellow to indicate system is recording approximately 10 sec. Event Indicator-normally black but after an event is recorded, it is white	x		
PEAK ACCELERATION RECORDER (6) Records the peak acceleration experienced. Capability to measure up to 2g. Uses no power supply.		x	x

FIGURE H-19

DUKE ENERGY
OCONEE NUCLEAR STATION

SPILL CONTROL EQUIPMENT/SUPPLIES

SEE THE FOLLOWING PROCEDURES/DOCUMENTS:

Emergency Planning:

PT/0/B/0250/030
PT/0/B/0250/045
ONS Prefire Plan

Chemistry:

CP/0/B/2001/008

Safety Assurance:

Spill Prevention Control Countermeasures Plan (SPCC)

FIGURE H-20

DUKE ENERGY
OCONEE NUCLEAR STATION

SURVEYS

Emergency	Control Room Instrumentation	In Station Radiological	Site and Site Boundary	Environs
Unusual	X	X	*	*
Alert	X	X	X	*
Site Area	X	X	X	X
General	X	X	X	X

* Conducted in the event effluent technical specifications are exceeded.

M. RECOVERY AND REENTRY PLANNING AND POST-ACCIDENT OPERATIONS

M.1 Reentry/Recovery Plans and Procedures

After the EOF is activated, it is the EOF Director's responsibility to determine when it is appropriate to enter into Recovery and to terminate from an emergency event. Emergency Plan procedures identify criteria that must be addressed before terminating the emergency condition and initiating recovery operations. The decision to terminate from a General Emergency condition must be discussed with the Senior NRC and State(s) representatives.

Decisions to relax protective actions for the public will be made by the appropriate State representatives. The EOF Director will provide information to the appropriate State agencies to facilitate the decision.

Recovery from a serious emergency situation is guided by the following principles:

The protection of the public health and safety is the foremost consideration in formulating recovery plans.

Public officials would be kept informed of recovery plans so that they can properly carry out their responsibilities to the public,

Periodic information would be provided to the news media so that they can provide information to the public regarding recovery plans and progress made.

Periodic status reports would be given to company employees at other locations and to government and industry representatives.

Reentry Planning

The plans and procedures for area reentry will consider existing as well as potential conditions inside containment. Prior to reentry, the following actions shall be taken.

1. Review all available radiation survey data.

2. Determine site areas potentially affected by radiological hazards.

3. Review radiation dose history of all personnel scheduled to participate in recovery operations. Determine the need for additional personnel. The radiation doses to employees and other radiation workers would be kept as low as reasonably achievable.

4. Review the adequacy of radiation survey equipment available. Determine the need for additional equipment and a source of procurement.

5. Preplan team activities, including areas to be surveyed, anticipated radiation levels, survey equipment required, protective clothing requirements, access control procedures, dose control procedures and communication capabilities.

6. Conduct comprehensive radiation survey of site facilities and define all radiological problem areas.

7. Isolate and post with appropriate warning signs all radiation and contamination areas.

8. Perform visual inspection of site areas and equipment.

9. All radiological conditions discovered and existing in the facility as determined by the reentry survey will be evaluated by site management.

10. Upon evaluation of the radiological condition, site management will determine what procedures are required to restore the site to a normal status.

11. Personnel radiation dose will be closely controlled and documented.

12. Recovery coordinators will take appropriate actions to ensure emergency personnel and equipment are properly monitored and controlled prior to leaving the radiation control area. Radiological conditions at the scene of the emergency should be properly defined, barricaded, and posted with appropriate signs.

M.2 Recovery Organization

Before entering the recovery phase, the EOF Director and the Emergency Coordinator shall establish a Recovery organization that is appropriate for the existing on-site and off-site conditions. Figure M-1 and M-2 describe suggested organization structures. They may be modified or supplemented as necessary to fit the particular circumstances. In some situations (such as no core damage), the normal onsite outage organization is adequate and the need for an offsite recovery organization is not anticipated.

The recovery activities would be managed much like a normal outage, except that certain activities unique to the post-accident situation may be managed by the Recovery organization. The organization would function as a matrix management organization to coordinate activities with the normal company organization. This organization may be located at the Emergency Operations Facility or the site, as appropriate.

M.3 Initiation of Recovery Operation - Radiological

Guidance concerning recovery operations are provided in the following procedures:

TSC/OSC - RP/0/A/l000/019, RP/0/A/1000/027

EOF - SR/0/A/2000/003

JIC - RP/0/A/1000/031 (Note: Information carried in plan has now been placed in this procedure)

Initiation of Recovery Operation - Hazardous Wastes/Materials

Recovery will be provided as directed by AD-EN-ALL-0200, Spill Response.

M.4 Total Population Exposure Estimates

The Radiological Assessment Group will periodically update the estimate of total population exposure.

FIGURE M-1
DUKE ENERGY COMPANY
OCONEE NUCLEAR STATION

ONSITE RECOVERY ORGANIZATION

RECOVERY ORGANIZATION (ONSITE)

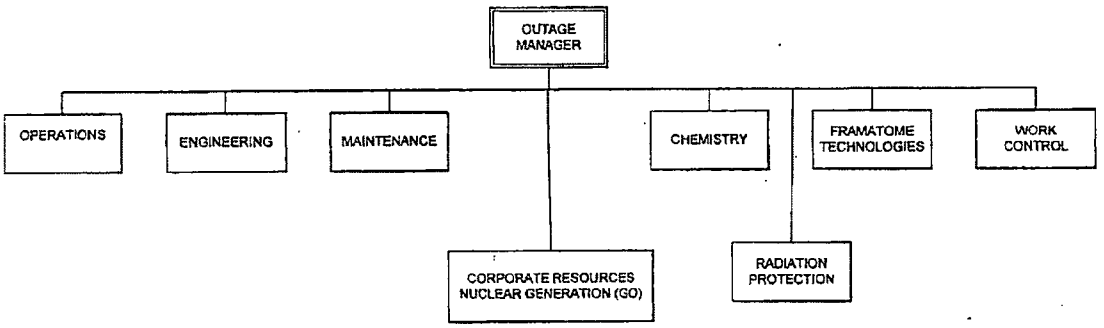

FIGURE M-2
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OFFSITE RECOVERY ORGANIZATION