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Vice President

December 6, 1999

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Subject: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287
Emergency Plan Implementing Procedures Manual
Volume C Revision 99-08

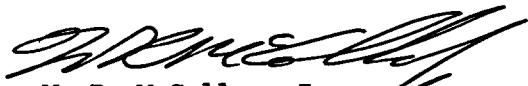
Please find attached for your use and review copies of the revision to the Oconee Nuclear Station Emergency Plan: Volume C Revision 99-08, December 1999.

This revision is being submitted in accordance with 10 CFR 50-54(q) and does not decrease the effectiveness of the Emergency Plan or the Emergency Plan Implementing Procedures.

Any questions or concerns pertaining to this revision please call Mike Thorne, Emergency Planning Manager at 864-885-3210.

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

Very truly yours,



W. R. McCollum, Jr.
VP, Oconee Nuclear Site

xc: (w/2 copies of attachments)
Mr. Luis Reyes,
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Mr. Steven Baggett
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(w/o Attachments, Oconee Nuclear Station)
NRC Resident Inspector
M. D. Thorne, Manager, Emergency Planning

A045

PPR ADOCN 0500 0269

December 6, 1999

**OCONEE NUCLEAR SITE
INTRASITE LETTER**

**SUBJECT: Emergency Plan Implementing Procedures
Volume C, Revision 99-08**

Please make the following changes to the Emergency Plan
Implementing Procedures Volume C by following the below
instructions.

REMOVE

Cover Sheet Rev. 99-07

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RP/0/B/1000/024 - 09/24/96

ADD

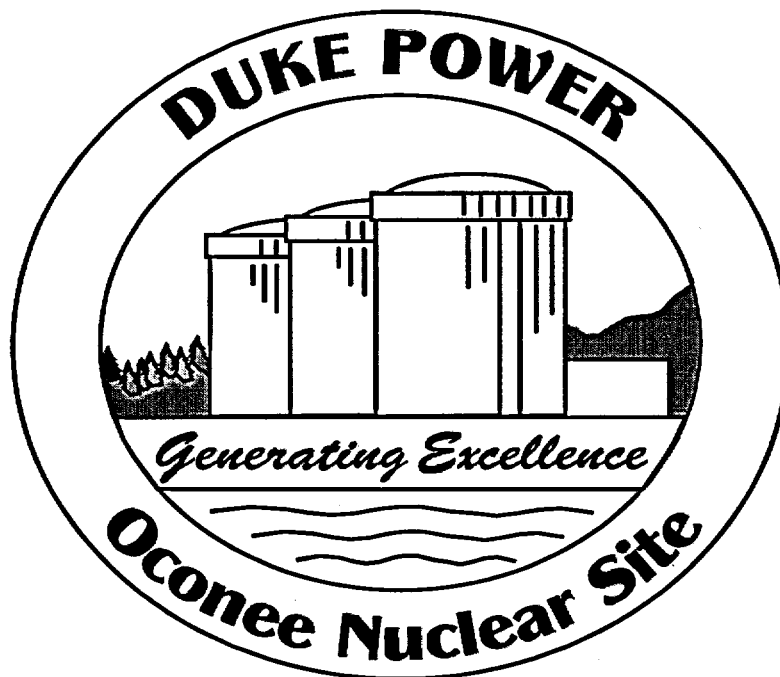
Cover Sheet Rev. 99-08

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RP/0/B/1000/024 - 11/10/99

DUKE POWER

EMERGENCY PLAN IMPLEMENTING PROCEDURES VOLUME C



APPROVED:

W. W. Foster, Manager
Safety Assurance

12/06/99

Date Approved

12/06/99

Effective Date

VOLUME C
REVISION 99-08
DECEMBER, 1999

VOLUME C
TABLE OF CONTENTS

RP/0/B/1000/21	Operations Interface (EOF) - (07/06/98)
RP/0/B/1000/22	Procedure for Site Fire Damage Assessment and Repair - (06/04/96)
RP/0/B/1000/24	Protective Action Recommendations (11/10/99)
RP/0/B/1000/28	Communications & Community Relations World of Energy Emergency Response Plan - (02/17/97)
RP/0/B/1000/29	Fire Brigade Response - (12/12/96)
RP/0/B/1000/31	Oconee Nuclear Site Joint Information Center Emergency Response Plan (08/15/98)
SR/0/B/2000/001	Standard Procedure for Public Affairs Response to the Emergency Operations Facility - (03/11/98)
Business Management	Business Management Emergency Plan - (09/16/99)
C&F Functional Area Directive 102	C&F Emergency Response Plan - ONS Specific - (06/15/98)
Engineering Directive 5.1	Engineering Emergency Response Plan - (03/08/99)
Human Resources Procedure ONS - Guideline #8a	ONS Human Resources Emergency Plan - (06/08/98)
Radiation Protection Manual Section 11.3	Off-Site Dose Assessment and Data Evaluation (04/06/99)
Radiation Protection Manual Section 11.7	Radiation Protection Environmental Monitoring for Emergency Conditions - (04/15/99)
Safety Assurance Directive 6.1	Safety Assurance Emergency Response Organization - (11/28/94)
Safety Assurance Directive 6.2	Safety Assurance Contingency Plan - (11/21/94)
Training Division	Training Division Emergency Response Guide DTG-007 (09/29/99)

Revision 99-08
December, 1999

INFORMATION ONLY

Duke Power Company PROCEDURE PROCESS RECORD

(1) ID No. RP/0/B/1000/024

Revision No. 3

PARATION

2) Station OCONEE NUCLEAR STATION

3) Procedure Title Protective Action Recommendations

4) Prepared By Rodney Brown Date 11/1/99

- 5) Requires 10CFR50.59 evaluation?
- Yes (New procedure or revision with major changes)
 - No (Revision with minor changes)
 - No (To incorporate previously approved changes)

6) Reviewed By Robert Taylor (QR) Date 11/9/99

Cross-Disciplinary Review By JE Sluder (QR)NA Date 11/2/99

Reactivity Mgmt. Review By _____ (QR)NA Date _____

(7) Additional Reviews

QA Review By _____ Date _____

Reviewed By _____ Date _____

Reviewed By _____ Date _____

(8) Temporary Approval (if necessary)

By _____ (SRO/QR) Date _____

By _____ (QR) Date _____

(9) Approved By M. Q. Thorne Date 11-10-99

PERFORMANCE (Compare with control copy every 14 calendar days while work is being performed.)

(10) Compared with Control Copy _____ Date _____

Compared with Control Copy _____ Date _____

Compared with Control Copy _____ Date _____

(11) Date(s) Performed _____

Work Order Number (WO#) _____

COMPLETION

(12) Procedure Completion Verification

- Yes NA Check lists and/or blanks initialed, signed, dated, or filled in NA, as appropriate?
- Yes NA Listed enclosures attached?
- Yes NA Data sheets attached, completed, dated, and signed?
- Yes NA Charts, graphs, etc. attached, dated, identified, and marked?
- Yes NA Procedure requirements met?

Verified By _____ Date _____

(13) Procedure Completion Approved _____ Date _____

Remarks (Attach additional pages, if necessary)

Duke Power Company
Oconee Nuclear Site

Protective Action Recommendations

Reference Use

Procedure No.

RP/0/B/1000/024

Revision No.

003

Electronic Reference No.

OX002WPL

Protective Action Recommendations

NOTE: This procedure is an implementing procedure to the Oconee Nuclear Site Emergency Plan and must be forwarded to Emergency Planning within three (3) working days of approval.

This procedure is intended to provide a means to quickly determine protective actions for radiological accidents at Oconee Nuclear Site by the Emergency Coordinator in the Technical Support Center or the EOF Director in the Emergency Operations Facility.

1. Symptoms

1.1 General Emergency Declared

2. Immediate Action

NOTE: Technical Support Center and Emergency Operations Facility may use HP/0/B/1009/018, (Offsite Dose Projections), to determine sectors.

- | | | | |
|---------------|---------------|-----|---|
| <u> </u> | <u> </u> | 2.1 | Evacuate 2 mile radius and 5 miles downwind unless conditions make evacuation dangerous. Shelter any sectors not evacuated. Consult Enclosure 4.2, (Sectors To Be Potentially Evacuated), to determine the sectors. |
| Time | Initial | | |
| <u> </u> | <u> </u> | 2.2 | Evacuate non-essential personnel from the site. |
| Time | Initial | | |
| <u> </u> | <u> </u> | 2.3 | Review wind direction and wind speed every 15 minutes to determine if additional downwind sectors need to be evacuated. |
| Time | Initial | | |
| <u> </u> | <u> </u> | 2.4 | Follow notification requirements to offsite agencies in accordance with RP/0/B/1000/015B, (Offsite Communications From The Technical Support Center), or RP/0/B/1000/015C, (Offsite Communications From The Emergency Operations Facility). |
| Time | Initial | | |

3. Subsequent Action

NOTE: Subsequent Actions will be completed by either the Technical Support Center or the Emergency Operations Facility.

- | | | | |
|-------|---------|-----|---|
| _____ | _____ | 3.1 | Evaluate fuel and containment status (building pressure and/or containment breach). |
| Time | Initial | | |
| _____ | _____ | 3.2 | Assess fuel damage. Request Nuclear Engineering in the TSC to provide the assessment. |
| Time | Initial | | |
| _____ | _____ | 3.3 | Review evacuation time estimates for the EPZ, Enclosure 4.3, (Evacuation Time Estimates). |
| Time | Initial | | |

NOTE: Transmission of a change in protective actions must begin within 15 minutes of determination.

3.4 Make determination if additional protective actions are required:

3.4.1 Change in Meteorological Conditions (wind speed/wind direction)

_____	_____	A.	Additional protective actions as recommended by the TSC Dose Assessment Liaison or EOF Radiological Assessment Manager utilizing HP/0/B/1009/018, (Offsite Dose Projections).
Date/Time	Initial		

3.4.2 Fuel Damage detected by Monitors

_____	_____	A.	Additional protective actions as recommended by the TSC Dose Assessment Liaison or EOF Radiological Assessment Manager utilizing HP/0/B/1009/018, (Offsite Dose Projections).
Date/Time	Initial		

3.4.3 Severe core damage (Condition 3 failed fuel per RP/0/B/1000/18, (Core Damage Assessment)).

_____	_____	A.	Evacuate 5 mile radius and 10 miles downwind.
Date/Time	Initial		

1. TSC Dose Assessment Liaison or EOF Radiological Assessment Manager shall be responsible for determining the sectors to be evacuated and sheltered.

ime Initial

3.5 Determine if any of the sheltered population affected by ground contamination should be evacuated based on information from field monitoring teams. Consult with EOF Radiological Assessment Manager.

3.5.1 Provide any updated protective action recommendations to offsite agencies.

3.6 Review dose projections with the TSC Dose Assessment Liaison or EOF Radiological Assessment Manager to determine if protective action recommendations may be required beyond the 10 mile EPZ.

Date/Time Initial

3.6.1 **IF** protective action recommendations are required beyond 10 miles, **THEN** notify the State EPD Director, as per RP/0/B/1000/019, (Technical Support Center Emergency Coordinator Procedure), or, RP/0/B/1000/020, (Emergency Operations Facility Director Procedure), and request that the state consider sheltering/evacuation of the general population located beyond the affected 10 mile EPZ Sectors.

4. Enclosures

- 4.1 Protective Action Recommendations Flowchart
- 4.2 Sectors To Be Potentially Evacuated
- 4.3 Evacuation Time Estimates

**Enclosure 4.1
Protective Action Recommendations**

RP/0/B/1000/024
Page 1 of 1

CONDITION	FUEL DAMAGE SYMPTOMS	CONTAINMENT STATUS	PROTECTIVE ACTION RECOMMENDED
General Emergency Declared	<ul style="list-style-type: none"> ◆ Loss of critical functions required for core protection ◆ High CETCs ◆ RB High rad levels 	Not applicable	Evacuate 2 mile radius and 5 miles downwind unless conditions make evacuation dangerous. (See Note 1). Shelter any sector in the 10 mile EPZ not evacuated.
<p>Additional protective recommendations will be based on the following conditions from either the Technical Support Center or the Emergency Operations Facility. TSC or the EOF shall continue assessment based on all available plant and field monitoring information. Modify protective actions as necessary. Locate and evacuate people from hot spots. Do not relax protective actions until the source of the threat is clearly under control.</p>			
Fuel Damage Detected by Monitors	◆ High rad levels as determined by Reactor Building and unit vent monitors	Known containment breach or RB pressure greater than 1 PSIG	Dose calculations required to determine additional evacuation requirements. EOF Radiological Assessment Manager shall determine the additional sectors to be evacuated or sheltered.
Condition 3 failed fuel as determined by RP/0/B/1000/018, (Core Damage Assessment)	<ul style="list-style-type: none"> ◆ RB high rad levels ($\geq 1.0 \times 10^4$ R/hr) ◆ H₂ increasing ($\geq 1.4\%$ - SBLOCA; $\geq 2.9\%$ - LBLOCA) ◆ Core Water Level <50% 	No credit is taken for containment.	Evacuate 5 mile radius and 10 miles downwind. Shelter any sector not evacuated. EOF Radiological Assessment Manager shall determine the additional sectors to be evacuated or sheltered.

Note 1. Dangerous travel conditions or immobile infirmed population.

Sectors To Be Potentially Evacuated

- 1.1 Secure meteorological information from SDS in the TSC or EOF.
- 1.2 Determine the meteorological instrumentation to use based on time of day. All meteorology data obtained from the onsite met tower or river tower must be a 15 minute average. National Weather Service data is a standard observation and is not a 15 minute average.

CHART A

Time of Day 1000 to 1600	First Priority	Second Priority	Third Priority	Fourth Priority
Wind speed	10M reading	River tower	60M reading times 0.5	NWS* x 0.5
Wind Direction	60M reading	10M reading	River tower	NWS

*Conversion factors for NWS data:

mph = 1.15 knots
 °C = .555(°F - 32)

CHART B

Time of Day 1600 to 1000 and River wind between 210° and 360° or 0° and 70°	First Priority	Second Priority	Third Priority
Wind speed	10M reading	60M reading x 0.5	Assume 1 mph
Wind Direction	60M reading	10M reading	Assume 0-360°

CHART C

Time of day 1600 to 1000 and River wind between 70° and 210° or not available	Meteorological Assumptions
Wind speed	Assume 1 mph
Wind Direction	Assume 0-360°

Enclosure 4.2
Sectors To Be Potentially Evacuated

1.3 Determine sectors to be potentially evacuated using Option A or B below based on time of day.

1.3.1 Option A - Daytime (1000 - 1600 hr)

- A. If using NWS wind direction assume A0 for 2 mile radius, A1, B1, C1, D1, E1, F1 for 5 mile downwind sectors to evacuate.
- B. If wind speed is ≥ 5 mph, use Table 2 below to determine downwind sectors to evacuate.
- C. If wind speed is < 5 mph, assume A0 for 2 mile radius, and A1, B1, C1, D1, E1, F1 for 5 miles downwind sectors to evacuate.

TABLE 2			
WIND DIRECTION	2 MILE RAD.	5 MILES DW	10 MILES DW
14.1° - 27°	A0	C1, D1, E1	C2, D2, E2
27.1° - 42°	A0	C1, D1, E1	D2, E2
42.1° - 66°	A0	D1, E1	D2, E2
66.1° - 85°	A0	D1, E1	D2, E2, F2
85.1° - 104°	A0	D1, E1, F1	D2, E2, F2
104.1° - 129°	A0	E1, F1	E2, F2
129.1° - 156°	A0	A1, E1, F1	A2, E2, F2
156.1° - 175°	A0	A1, E1, F1	A2, F2
175.1° - 181°	A0	A1, F1	A2, F2
181.1° - 219°	A0	A1, B1, F1	A2, B2, F2
219.1° - 255°	A0	A1, B1	A2, B2
255.1° - 271°	A0	A1, B1, C1	A2, B2, C2
271.1° - 297°	A0	B1, C1	B2, C2
297.1° - 312°	A0	B1, C1	B2, C2, D2
312.1° - 345°	A0	B1, C1, D1	B2, C2, D2
345.1° - 14°	A0	C1, D1	C2, D2

NOTE: Use wind speed and direction from Chart B, Step 1.2.

1.3.2 Option B - Nighttime (1600 - 1000 hr)

- A. If river wind direction is between 210° - 360° or 0° - 70° use OPTION A above to determine sectors.
- B. If river wind direction is between 70° - 210° or is not available, assume A0 for 2 mile radius and A1, B1, C1, D1, E1, F1 for downwind sectors to evacuate.

Enclosure 3
Evacuation Time Estimate

Analysis Case	Approx. Distance (Miles)	Approx. Direction	Subareas Included ⁵	Evacuation Time (minutes) ³						Fair Weather Weekend with Peak Clemson Population*
				Fair Weather			Adverse Weather ⁴			
				Winter Weekday*	Winter Weeknight*	Summer Weekend*	Winter Weekday*	Winter Weeknight*	Summer Weekend*	
1	0-2	180°, E	A-0 ¹	200	160	160	200	160	160	270
2	0-2	180°, W	A-0 ²	200	160	160	200	160	160	270
3	0-5	90°, NE	A-0 ¹ , A-1	200	160	160	200	160	160	270
4	0-5	90°, SE	A-0 ¹ , B-1, C-1	200	160	160	215	180	180	270
5	0-5	90°, NW	A-0 ² , E-1, F-1	200	160	160	200	200	160	270
6	0-5	90°, SW	A-0 ² , D-1	200	160	160	200	160	160	270
7	0-10	90°, NE	A-0 ¹ , A-1, A-2	220	180	180	250	200	200	270
8	0-10	90°, SE	A-0 ¹ , B-1, C-1, B-2, C-2	220	200	200	250	240	240	365
9	0-10	90°, NW	A-0 ² , E-1, F-1, E-2, F-2	240	225	255	275	260	270	270
10	0-10	90°, SW	A-0 ² , D-1, D-2	255	225	250	275	265	275	270
11	0-10	180°, E	Pickens County - A-0 ¹ , A-1, B-1, C-1, A-2, B-2, C-2	235	210	210	250	265	275	365
12	0-10	180°, W	Oconee County - A-0 ² , D-1, E-1, F-1, D-2, E-2, F-2	255	230	255	300	275	275	270
13	0-10	360°	Entire EPZ - A-0 ¹ , A-0 ² , A-1, B-1, C-1, A-2, B-2, C-2, D-1, E-1, F-1, D-2, E-2, F-2	255	230	255	300	275	275	365

¹ Pickens County portion of Subareas A-0.

² Oconee County portion of Subareas A-0.

³ Includes times associated with notification, preparation and travel out of the EPZ area, rounded to nearest 5-minute interval.

⁴ Reduction in roadway capacities and travel speeds of 20% for summer weekend conditions (rain), 30% for winter weekday and winter weeknight conditions (ice).

⁵ See Figure 1.2 (in back of report) for identification of subareas.

* Evacuation of outdoor transient facilities throughout the entire EPZ is included in all evacuation cases, per the offsite RERP's.

NOTE: Subareas = Sectors