

April 22, 1985

DMB 014

Dockets Nos. 50-269, 50-270  
and 50-287

<u>Distribution</u>	WJones
<u>Docket File</u>	LHarmon
LPDR	TBarnhart+12
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Gray Files+4	ACRS-10
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CMiles	JPartlow
OELD	EJordan
BGrimes	RDiggs
EBlackwood	HOrnstein
ORB#4 Rdg	Ringram

Mr. Hal B. Tucker  
Vice President - Nuclear Production  
Duke Power Company  
P. O. Box 33189  
422 South Church Street  
Charlotte, North Carolina 28242

Dear Mr. Tucker:

The Commission has issued the enclosed Amendments Nos. 138, 138, and 135 to Facility Operating Licenses Nos. DPR-38, DPR-47 and DPR-55 for the Oconee Nuclear Station, Units Nos. 1, 2 and 3. These amendments consist of changes to the Station's common Technical Specifications (TSS) in response to your telecopied application on April 11, 1985, as supplemented by your telecopied letter dated April 12, 1985.

On April 12, 1985, you received oral authorization, followed by a letter from the NRC, for a one-time change to TS 3.3.5.c(2)(b), associated with the operability of the '3A' Reactor Building Cooling Unit (RBC) for Oconee Unit 3. The change allowed a one-time extension of inoperability to replace, test and return to service the '3A' RBC provided that both Reactor Building Spray (RBS) trains are operable and the '3A' RBC will be returned to service by April 20, 1985, in accordance with the above revised Technical Specification. The change was necessitated by an inoperable RBC motor having open windings. The additional seven days would allow for replacement, testing and return to service of the inoperable RBC motor. Oconee Unit 3 continues to operate at 100% power.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance and Final Determination of No Significant Hazards Consideration and Opportunity for Hearing will be included in the Commission's next monthly Federal Register Notice.

Sincerely,

**"ORIGINAL SIGNED COPY"**

Helen Nicolaras, Project Manager  
Operating Reactors Branch #4  
Division of Licensing

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P PDR

Enclosures:

1. Amendment No. 138 to DPR-38
2. Amendment No. 138 to DPR-47
3. Amendment No. 135 to DPR-55
4. Safety Evaluation

cc w/enclosures:

See next page

ORB#4:DL  
RIngram  
4/16/85

ORB#4:DL  
HNicolaras;cf  
4/16/85

ORB#4:DL  
JStoltz  
4/11/85

OELD  
JStoltz  
4/17/85

AD-OR:DL  
GLainas  
4/12/85

ORB:DL  
JCHolahan  
4/16/85

with  
changes made to  
SBR (NSHC/2/Emergency Funding)

FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Dockets Nos. 50-269, 50-270, & 50-287 Facility Oconee Nuclear Station, Units 1, 2 and 3  
Licensee: Duke Power Company Date of application as supplemented April 12, 1985 Telecopied April 11, 1985,

1. Attach initial NSHC determination (Attachment 4) relating to this action.
2. Summary of State telephone consultation:

State contacted on 4/12/85. See Safety Evaluation.

3. Summary of any public comments received by telephone:  
None

4. Attach any written State or public comments regarding NSHC.  
None

5. Final determination

- ( X ) The amendment request involves no significant hazards consideration.  
( ) The amendment request involves a significant hazards consideration.

6. Basis for determination and response to comments received. (Attach additional sheets, if necessary.)  
See Safety Evaluation

7. Concurrences:

		<u>Date</u>
a.	<u>Helen Nicolaras</u> (Project Manager)	<u>4/16/85</u>
b.	<u>John F. Stolz</u> (Branch Chief)	<u>4/17/85</u>
c.	<u>Gus C. Lainas</u> (Assistant Director)	<u>4/23/85</u>
d.	<u>George E. Johnson</u> (ELD)	<u>4/17/85</u>

8. Approved:

~~Hugh L. Thompson, Jr.~~  
(Director, Division of Licensing)

~~4/17/85~~

INITIAL  
NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION  
AND NOTICING ACTION

Docket No. 50-269, 50-270, & 50-287 Facility: Oconee Nuclear Station, Units 1, 2 and 3  
Licensee: Duke Power Company Date of application: 1985, as supplemented April 11, April 12, 1985

Request for: These amendments would revise the Station's common Technical Specifications (TSs) to allow a one-time extension to TS 3.3.5.c.(2)(b), associated with operability of the '3A' Reactor Building Cooling (RBC) Unit for Oconee Unit 3. The change would allow for a seven-day extension of inoperability to replace, test and return to service the '3A' RBC provided that both Reactor Building Spray Drains are operable and the '3A' RBC will be returned to service by April 20, 1985.

Initial Determination:

- (  ) Proposed determination - amendment request involves no significant hazards considerations (NSHC).
- (  ) Final determination - amendment request involves significant hazards considerations (SHC).

Basis for Determination

- (  ) Licensee's NSHC discussion has been reviewed and is accepted. See attached amendment request.
- (  ) Basis for this determination is presented in the attached notice.
- (  ) Other (state):  
See attachment.

(Attach additional sheets as needed.)

Initial Noticing Action: (Attach appropriate notice or input for monthly FRN)

1. (  ) Monthly FRN. Notice of opportunity for hearing (30 days) and request for comments on proposed NSHC determination - monthly FRN input is attached (Attachment 8).
2. (  ) Individual FRN (30 days). Same notice matter as above. Time does not allow waiting for next monthly FRN (Attachments 9a and 9b).

(THIS FORM SHOULD BE TYPED EXCEPT FOR UNUSUAL, URGENT CIRCUMSTANCES.)

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Basis for proposed no significant hazards consideration determination:

The request for amendment would change the TSs to allow Oconee Unit 3 to continue operating for an additional seven days beyond the seven days allowed by TS 3.3.5.c(2)(b), with the '3A' Reactor Building Cooling (RBC) unit inoperable, provided that the two Reactor Building Spray (RBS) trains are operable, and that the '3A' RBC unit is returned to service by April 20, 1985. The additional seven days is required so that the '3A' RBC fan motor can be replaced.

The Commission has provided guidance concerning the determination of significant hazards consideration by providing certain standards (10 CFR 50.92(c)). A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not 1) involve a significant increase in the probability or consequences of an accident previously evaluated, or 2) create the possibility of a new or different kind of accident from any accident previously evaluated, or 3) involve a significant reduction in a margin of safety.

The probability of worst case single failure coinciding with a design basis LOCA has been previously evaluated to be low and remains low for the proposed operation without the '3A' RBC unit for an additional seven days beyond that already authorized.

As discussed in the SE, the licensee states that an alternate supply of electric power can be rapidly provided to the fan cooler disabled by a worst case single failure. Nevertheless, the effect of having only one fan cooler and one spray train available, rather than two fan coolers and one spray train, would be to slightly decrease the rate at which the pressure would decrease after the peak pressure is reached. The slower decrease of peak pressure may affect the assumptions made for containment leak rate for the remaining duration of the accident and may result in a slight but not significant increase in the consequences of an accident previously evaluated.

Notwithstanding the low probability of the single failure noted above, the remaining operable equipment available following the worst case single failure coupled with a design basis LOCA is still sufficient to keep the containment pressure below the peak calculated pressure of 54.6 psig. Accordingly, the margin to the design pressure (59 psig) of the containment is not reduced.

Based on the above, the staff proposes to determine that these proposed amendments do not involve a significant hazards consideration.

## Evaluation of Emergency Circumstances

### Licensee Request.

By letter telecopied on April 11, 1985, Duke Power Company (the licensee) requested a one-time seven-day extension of the allowable period of inoperability to replace, test and return to service the '3A' Reactor Building Cooling (RBC) unit, provided both Reactor Building Spray trains are operable and the '3A' RBC will be returned to service by April 20, 1985, in accordance with the revised Technical Specification (TS) page 3.3-3. The licensee requested expedited review of this request because at the end of the seven-day Limiting Condition for Operation, Oconee Unit 3 would have to shutdown.

In its amendment request, the licensee addressed the need for approval of the amendment on an emergency basis.

### Emergency Circumstances.

Licensee's submittals have been reviewed in light of the standards in 10 C.F.R. 50.91.

On April 6, 1985, a high outer motor bearing temperature "Stat-Alarm" for the '3A' RBC fan was received by Control Room personnel at Oconee Unit 3. Upon investigation, it was discovered that the motor for the '3A' RBC fan had open windings. The '3A' RBC train was declared inoperable at 0933 hours on April 6, 1985. At that time, Oconee Unit 3 entered the degraded mode specified by TS 3.3.5.c. (2)(b). This TS permits continued power operation for up to seven days with one RBC fan inoperable as long as both reactor building spray trains are operable.

A replacement RBC unit motor was located on April 8, 1985, but needed to be refurbished, and was not available to be installed until April 10, 1985. In addition high temperatures in the Reactor Building (RB) delayed until April 10, 1985 needed access to the RB to replace the motor, and continued high temperatures slowed the replacement activity once access was available. As a result, the earliest projected date for return of the RBC unit to service was determined to be April 13, 1985, leading to the subject emergency request. Based on the justification submitted by licensee, the Staff has determined that (a) without immediate action on the amendment Oconee Unit 3 would have to be shut down in accordance with the applicable TS, and (b) licensee acted with due diligence to identify and repair the inoperable RBC unit and submitted its application in a timely manner. As a result, the Commission finds that an emergency situation existed.

- 3. ( ) Local media notice. Valid exigent circumstances exist (evaluated below). Local media notice requesting public comments on proposed NSHC determination is attached (Attachment 10).
- 4. (X) No notice. A valid emergency situation exists (evaluated below) and there is no time for public notice on proposed NSHC determination. (No attachment.)
- 5. ( ) Individual FRN (30-days). Licensee's claim of exigent or emergency circumstances is invalid (evaluated below). Notice of opportunity for hearing (30 days) and request for comments on proposed NSHC determination is attached (Attachments 9a and 9b). Letter of explanation to licensee is also attached.
- 6. ( ) Individual FRN (30-days). The amendment request involves SHC. Notice of opportunity for prior hearing is attached (Attachment 5). Letter to licensee also attached.
- 7. ( ) Individual Short FRN. Valid emergency circumstances exist (evaluated below). There is no time for the usual 30-day FRN. (Attachment 16).

Evaluation of exigent or emergency circumstances (if applicable):

See attachment.

(attach additional sheets as needed)

Approvals:

Date

- |   |   |                |
|---|---|----------------|
| 1.  | <u>Helen Nicolaras</u><br>(Project Manager)   | <u>4/16/85</u> |
| 2.  | <u>John F. Stolz</u><br>(Branch Chief)  | <u>4/17/85</u> |
| 3.  | <u>GE Johnson</u> - Concurrence on emergency circumstances and substance of determination, but not in such determination as proposed determination implies public notice.<br>(OELD) | <u>4/18/85</u> |
| <u>Additional approval (for noticing actions types 3, 4, 5, 6 and 7):</u> |   |                |
| 4.  | <u>Gus C. Kainas</u><br>(Assistant Director)  | <u>4/24/85</u> |

Additional approval (for noticing action types 1 and 5):

- |    |   |               |
|----|---|---------------|
| 5. | <u>Hugh L. Thompson, Jr.</u><br>(Director, Division of Licensing) | <u>4/ /85</u> |
|----|---|---------------|

Attachment: as indicated

cc: Original - Docket File (with note "Docket File only")  
Project Manager  
Licensing Assistant  
Branch Files

Duke Power Company

cc w/enclosure(s):

Mr. William L. Porter  
Duke Power Company  
P. O. Box 33189  
422 South Church Street  
Charlotte, North Carolina 28242

Honorable James M. Phinney  
County Supervisor of Oconee County  
Walhalla, South Carolina 29621

Regional Radiation Representative  
EPA Region IV  
345 Courtland Street, N. E.  
Atlanta, Georgia 30308

Mr. J. C. Bryant  
Senior Resident Inspector  
U. S. Nuclear Regulatory Commission  
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Seneca, South Carolina 29678

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Babcock & Wilcox  
Nuclear Power Generation Division  
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Office of Intergovernmental Relations  
116 West Jones Street  
Raleigh, North Carolina 27603

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South Carolina Department of Health  
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Administrator  
U. S. Nuclear Regulatory Commission,  
Region II  
101 Marietta Street, N. W.  
Suite 2900  
Atlanta, Georgia 30303



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

DUKE POWER COMPANY

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 138  
License No. DPR-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Duke Power Company (the licensee) telecopied April 11, 1985, as supplemented April 12, 1985, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-38 is hereby amended to read as follows:

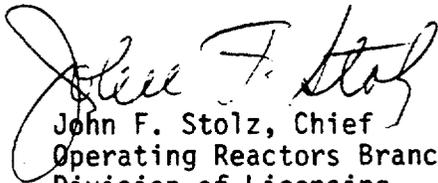
3.B Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 138 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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3. This license amendment became effective on April 12, 1985.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: April 22, 1985



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

DUKE POWER COMPANY

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 138  
License No. DPR-47

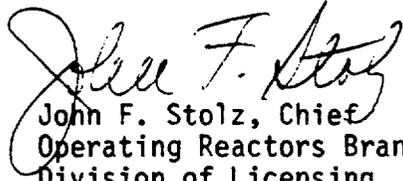
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Duke Power Company (the licensee) telecopied April 11, 1985, as supplemented April 12, 1985, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-47 is hereby amended to read as follows:

3.B Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 138 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment became effective on April 12, 1985.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: April 22, 1985



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

DUKE POWER COMPANY

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 135  
License No. DPR-55

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Duke Power Company (the licensee) telecopied April 11, 1985, as supplemented April 12, 1985, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-55 is hereby amended to read as follows:

3.B Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 135 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment became effective on April 12, 1985.

FOR THE NUCLEAR REGULATORY COMMISSION

  
John F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: April 22, 1985

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 138 TO DPR-38

AMENDMENT NO. 138 TO DPR-47

AMENDMENT NO. 135 TO DPR-55

DOCKETS NOS. 50-269, 50-270 AND 50-287

Replace the following page of the Appendix "A" Technical Specifications with the attached page. The revised page is identified by amendment numbers and contains vertical lines indicating the area of change. ✍

Remove Page

Insert Page

3.3-3

3.3-3

- b. The BWST shall contain a minimum level of 46 feet of water having a minimum concentration of 1835 ppm boron at a minimum temperature of 50°F. The manual valve, LP-28, on the discharge line shall be locked open. If these requirements are not met, the BWST shall be considered unavailable and action initiated in accordance with Specification 3.2.

### 3.3.5 Reactor Building Cooling (RBC) System

- a. Prior to initiating maintenance on any component of the RBC system, the redundant component shall be tested to assure operability.
- b. When the RCS, with fuel in the core, is in a condition with pressure equal to or greater than 350 psig or temperature equal to or greater than 250°F and subcritical:
  - (1) Two independent RBC trains, each comprised of an RBC fan, associated cooling unit, and associated ESF valves shall be operable.
  - (2) Tests or maintenance shall be allowed on any component of the RBC system provided one train of the RBC and one train of the RBS are operable. If the RBC system is not restored to meet the requirements of Specification 3.3.5.b(1) above within 24 hours, the reactor shall be placed in a condition with RCS pressure below 350 psig and RCS temperature below 250°F within an additional 24 hours.
- c. When the reactor is critical:
  - (1) In addition to the requirements of Specifications 3.3.5.b(1) above, the remaining RBC fan, associated cooling unit, and associated ESF valves shall be operable.
  - (2) Tests or maintenance shall be allowed on one RBC train under either of the following conditions:
    - (a) One RBC train may be out of service for 24 hours.
    - (b) One RBC train may be out of service for 7 days provided both RBC trains are operable.\*
    - (c) If the inoperable RBC train is not restored to meet the requirements of Specification 3.3.5.c(1) within the time permitted by Specification 3.3.5.c(2) (a) or (b), the reactor shall be placed in a hot shutdown condition within 12 hours. If the requirements of Specification 3.3.5.c(1) are not met within an additional 24 hours following hot shutdown, the reactor shall be placed in a condition with RCS pressure below 350 psig and RCS temperature below 250°F within an additional 24 hours.

\*For the "3A" RBC train, a one-time extension of inoperability is granted in order to allow for repair, provided both RBS trains are operable and that the "3A" RBC train is returned to service no later than 11:59 p.m., April 20, 1985.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 138 TO FACILITY OPERATING LICENSE NO. DPR-38

AMENDMENT NO.138 TO FACILITY OPERATING LICENSE NO. DPR-47

AMENDMENT NO. 135 TO FACILITY OPERATING LICENSE NO. DPR-55

DUKE POWER COMPANY

OCONEE NUCLEAR STATION, UNITS NOS. 1, 2, AND 3

DOCKETS NOS. 50-269, 50-270 AND 50-287

1.0 Introduction

By letter telecopied on April 11, 1985, Duke Power Company (the licensee) requested a one-time extension of inoperability to replace, test and return to service the '3A' Reactor Building Cooling (RBC) unit, provided both Reactor Building Spray trains are operable and the '3A' RBC will be returned to service by April 20, 1985, in accordance with the revised Technical Specification (TS) page 3.3-3.

The licensee requested expedited review of this request because at the end of the seven-day Limiting Condition for Operation, Oconee Unit 3 would have to shutdown.

After discussions with the NRC staff, the licensee telecopied a supplement to the amendment request on April 12, 1985.

On April 6, 1985, a high outer motor bearing temperature "Stat-Alarm" for the '3A' RBC fan was received by Control Room personnel at Oconee Unit 3. Upon investigation, it was discovered that the motor for the '3A' RBC fan had open windings. The '3A' RBC train was declared inoperable at 0933 hours on April 6, 1985. At that time, Oconee Unit 3 entered the degraded mode specified by TS 3.3.5.c.(2)(b). This TS permits continued power operation for up to seven days with one RBC fan inoperable as long as both reactor building spray trains are operable. The licensee has since determined that it may not be possible to restore the inoperable fan to an operable status within the seven-day period and has requested an amendment to TS 3.3.5.c.(2)(b) which would extend the time period from seven days to fourteen days. These amendment requests were submitted April 11, 1985 and supplemented on April 12, 1985. Specifically, the amendment requests would grant a one-time extension of inoperability for the '3A' RBC train of no longer than fourteen days, which includes the seven days allowed by TS 3.3.5.c.(2)(b), plus seven additional days. At this time, the licensee does not anticipate

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requiring the full seven additional days to repair and return to service the inoperable '3A' RBC train. Currently, the licensee projects installation of the replacement fan motor by April 12, 1985 and after completing the functional test, returning the '3A' RBC train to service by April 13, 1985. This is considered an optimistic schedule and assumes that no problems are encountered.

## 2.0 Background

The Reactor Building Cooling System provides the design heat removal capacity following a loss-of-coolant accident with all three coolers operating by continuously circulating the steam-air mixture past the cooling tubes to transfer heat from the containment atmosphere to the low pressure service water which is passed through the cooler tubes.

The Reactor Building Cooling System consists of three separate, independent units. Each cooling unit consists of a fan, a tube cooler, and the required distribution ductwork. The Reactor Building atmosphere is circulated past the cooling tubes by the fan and returned to the building. Cooling water for the cooling units is supplied by the Low Pressure Service Water System. During normal operation these units, with two fans operating, serve to cool the reactor building atmosphere. Upon receipt of the signal from the Engineered Safeguards Actuation System, the two operating fans switch to half speed and the third fan starts at half speed.

Following a loss-of-coolant-accident, reactor building pressure is limited to below the design pressure. The design heat load at these conditions is  $240 \times 10^6$  Btu/hr. The design inlet cooling water is 75°F, although the expected cooling water range is 45 - 75°F. The heat removal capacity for each cooling unit is  $80 \times 10^6$  Btu/hr.

In addition to the Reactor Building Cooling System, the Reactor Building Spray System will function independently to satisfy design heat removal requirements following a loss-of-coolant accident. This system consists of two half capacity trains, each comprised of a spray pump, spray header, isolation valves, and the necessary piping. Each spray train has a  $120 \times 10^6$  Btu/hr heat removal capacity.

TSs 3.3.5 and 3.3.6 require the Reactor Building Cooling and Spray Systems, respectively, to be operable during power operation. However, in order to meet the design Reactor Building cooling capacity of  $240 \times 10^6$  Btu/hr, any of the following may suffice: (1) two spray trains, (2) one spray train and two fan coolers, or (3) three fan coolers. With the 'A' fan cooler inoperable, the worst case single failure is the inoperability of the TD 4160 V switchgear which would render Reactor Building spray train 'A' and the 'B' fan cooler inoperable. This would leave the unit with the 'C' fan cooler and Reactor Building spray train 'B' operable ( $200 \times 10^6$  Btu/hr heat removal capability). However, since this heat removal is needed only for long-term building cooling, not to mitigate the short-term pressure peak, an alternate supply of electrical power can be provided to the 'B' fan cooler manually, either from the Oconee Unit 3 TC switchgear or from an Oconee Unit 2 transformer. Therefore, the long-term heat removal capability is assured.

### 3.0 Evaluation

The Reactor Building Cooling System is required both to minimize the reactor building peak pressure after a large-break loss-of-coolant-accident and to provide long-term containment cooling following a design basis accident. Analysis of the worst case pipe break indicates that containment pressure would increase to 53.8 psig, with both reactor building spray systems operable but only two of the three fan cooler units operable (FSAR 15.14.5). Containment pressure in this case does not exceed the reactor building design pressure of 59.0 psig. With one fan cooler unit out of service, the long-term design cooling capacity of  $240 \times 10^6$  Btu/hr can be provided by either both reactor building spray systems or a combination of one reactor building spray system and two reactor building cooling system fan coolers. Since both reactor building spray systems and two reactor building fan cooler trains are operable, the reactor building design cooling capacity will be available even with the '3A' fan cooler unit out of service, if no additional failures occur during the event.

With the '3A' fan cooler unit inoperable, the worst case single failure is the postulated loss of the TD 4160 V switchgear which would render one reactor building spray system and one additional fan cooler unit inoperable. Analysis by the licensee indicates that in the event of a design basis LOCA, coupled with this worst case single failure, containment pressure still would not exceed the reactor building design pressure, but long-term heat removal capacity would be reduced below the design basis. The long-term heat removal capacity with only one reactor building spray unit and one reactor building fan cooler unit would be  $200 \times 10^6$  Btu/hr, compared to the  $240 \times 10^6$  Btu/hr specified in the design basis. The licensee has stated in its submittal that an alternate supply of electric power can be rapidly provided to the fan cooler disabled by the worst case single failure. Alternate power would be supplied by manually switching the 4160 V bus power source to either Oconee Unit 3 TC switchgear or to the Oconee Unit 2 transformer. Restoration of electric power to this fan cooler would provide heat removal capacity in excess of that required by the design basis. Moreover, the licensee states that the  $240 \times 10^6$  Btu/hr design basis heat removal capability is a conservatively high figure and the licensee asserts that realistically, one reactor building fan cooler unit and one reactor building spray system should provide adequate cooling.

The Oconee FSAR (Section 15.16.3.3.1) addresses mixing of the reactor building atmosphere as related to hydrogen purging. The fan cooler units are mentioned as only one of several sources of mixing for the containment atmosphere and no credit is explicitly taken for any particular number of fan coolers operating. In addition, in the event of a LOCA and the worst case single failure, the licensee assures us that an additional fan cooler can be rapidly restored to operation by manual transfer to another power supply. Also Oconee now has a hydrogen recombiner which would be used to control hydrogen concentration. Therefore, the operability of the '3A' fan cooler unit should have no deleterious effect on post-accident hydrogen control measures.

The licensee's request for a one-time seven-day extension to the TSs regarding the inoperability of the '3A' reactor building fan cooler unit does not appear to be unreasonable. The existing TS 3.3.5.c.(2)(b) allows operation with the loss of one reactor building fan cooler unit for seven days. The licensee has demonstrated that during the time of this extension, results of a large-break LOCA, combined with a worst case single failure:

1. would yield a reactor building pressure not in excess of the design,
2. would not deleteriously affect hydrogen mixing, but
3. would slightly reduce containment long-term heat removal capacity.

The reduction in heat removal capacity is mitigated by the conservative assumptions used in the design analysis. One fan cooler unit and one spray train should provide adequate reactor building cooling. In addition, the 4160 V switchgear is a highly reliable piece of equipment and the possibility of a failure of it coincident with a large-break LOCA is extremely low. In addition, the fact that electrical power can be rapidly restored to the fan cooler unit lost in the worst case single failure scenario, for most failure mechanisms, is a significant mitigating factor in this analysis. Since heat removal capability would be below design basis until power is restored, compensatory measures should include increased operator awareness of the procedures required to restore electric power to the fan cooler unit in the event of a worst case single failure. The licensee has agreed to this compensatory measure. Based on the foregoing, we find the licensee's request to be acceptable.

#### 4.0 Final No Significant Hazards Consideration Determination

The Commission's regulations in 10 CFR 50.92 state that the Commission may make a final determination that a license amendment involves no significant hazards considerations if operation of the facility, in accordance with the amendments, would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- (3) Involve a significant reduction in a margin of safety.

The information in this Safety Evaluation (SE) provides the basis for evaluating the license amendments against these criteria. The request for amendment changes the TSs to allow Oconee Unit 3 to continue operating for an additional seven days beyond the seven days allowed by TS 3.3.5.c(2)(b), with the '3A' RBC unit inoperable, provided that the two RBS trains are operable, and that the '3A' RBC unit is returned to service by April 20, 1985. The additional seven days is required so that the '3A' RBC fan motor can be replaced, tested and returned to service.

The probability of worst case single failure coinciding with a design basis LOCA has been previously evaluated to be low and remains low for the proposed operation without the '3A' RBC unit for an additional seven days beyond that already authorized.

As discussed in the SE, the licensee states that an alternate supply of electric power can be rapidly provided to the fan cooler disabled by a worst case single failure. Nevertheless, the effect of having only one fan cooler and one spray train available, rather than two fan coolers and one spray train, would be to slightly decrease the rate at which the pressure would decrease after the peak pressure is reached. The slower decrease of peak pressure may affect the assumptions made for Containment leak rate for the remaining duration of the accident and may result in a slight but not significant increase in the consequences of an accident previously evaluated.

Notwithstanding the low probability of the single failure noted above, the remaining operable equipment available following the worst case single failure coupled with a design basis LOCA is still sufficient to keep the containment pressure below the peak calculated pressure of 54.6 psig. Accordingly, the margin to the design pressure (59 psig) of the containment is not reduced.

The RBC units were designed to mitigate the consequences of design basis LOCA, main steam line break, or other accidents, and provide containment ventilation during normal operation. The fan cooler, in a passive state during inoperability, would not create the possibility of a new or different kind of accident from any accident previously evaluated. Based on the above discussion, we conclude that:

- (1) Operation of the facilities in accordance with the amendments would not significantly increase the probability or consequences of an accident previously evaluated.
- (2) Operation of the facilities in accordance with the amendments would not create the possibility of a new or different kind of accident from any accident previously evaluated.
- (3) Operation of the facilities in accordance with the amendments would not involve a significant reduction in a margin of safety.

Accordingly, we conclude that the amendments to Facility Operating Licenses DPR-38, DPR-47 and DPR-55 involve no significant hazards considerations.

## 5.0 State Consultation

In accordance with the Commission's regulations, consultation was held with the State of South Carolina by telephone. The State expressed no concern either from the standpoint of safety or of our no significant hazards consideration determination.

The State wanted the NRC staff to verify that the licensee was exerting its best efforts to return the reactor building cooler to service as soon as possible. We have verified that the licensee is providing its best efforts on this matter.

## 6.0 Evaluation of Emergency Circumstances

### Licensee Request

By letter telecopied on April 11, 1985, Duke Power Company (the licensee) requested a one-time seven-day extension of the allowable period of inoperability to replace, test and return to service the '3A' Reactor Building Cooling (RBC) unit, provided both Reactor Building Spray trains are operable and the '3A' RBC will be returned to service by April 20, 1985, in accordance with the revised Technical Specification (TS) page 3.3-3. The licensee requested expedited review of this request because at the end of the seven-day Limiting Condition for Operation, Oconee Unit 3 would have to shutdown.

In its amendment request, the licensee addressed the need for approval of the amendments on an emergency basis.

### Emergency Circumstances

The licensee's submittals have been reviewed in light of the standards in 10 CFR 50.91.

On April 6, 1985, a high outer motor bearing temperature "Stat-Alarm" for the '3A' RBC fan was received by Control Room personnel at Oconee Unit 3. Upon investigation, it was discovered that the motor for the '3A' RBC fan had open windings. The '3A' RBC train was declared inoperable at 0933 hours on April 6, 1985. At that time, Oconee Unit 3 entered the degraded mode specified by TS 3.3.5.c.(2)(b). This TS permits continued power operation for up to seven days with one RBC fan inoperable as long as both reactor building spray trains are operable.

A replacement RBC unit motor was located on April 8, 1985, but needed to be refurbished and was not available to be installed until April 10, 1985. In addition, high temperatures in the Reactor Building (RB) delayed until April 10, 1985 needed access to the RB to replace the motor, and continued high temperatures slowed the replacement activity once access was available. As a result, the earliest projected date for return of the RBC unit to service was determined to be April 13, 1985, leading to the subject emergency request. Based on the justification submitted by licensee, we have determined that (a) without immediate

action on the amendment Oconee Unit 3 would have to be shut down in accordance with the applicable TS, and (b) licensee acted with due diligence to identify and repair the inoperable RBC unit and submitted its application in a timely manner. As a result, the Commission finds that an emergency situation existed.

#### 7.0 Environmental Consideration

These amendments involve a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. We have determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has made a final no significant hazards consideration finding with respect to these amendments. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

#### 8.0 Conclusion

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: April 22, 1985

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