October 14, 1988

Docket Nos.: 50-269, 50-270
and 50-287

Mr. H. B. Tucker, Vice President
Nuclear Production Department
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Tucker:

SUBJECT: ISSUANCE OF AMENDMENT NOS. 171, 171, AND 168 TO FACILITY OPERATING LICENSES DPR-38, DPR-47, and DPR-55 - OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3 (TACS 63541/63542/63543)

The Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 171,171, and 168 to Facility Operating Licenses Nos. DPR-38, DPR-47 and DPR-55 for the Oconee Nuclear Station, Units 1, 2, and 3. These amendments consist of changes to the Technical Specifications (TS) in response to your request dated February 6, 1986, as supplemented August 20, 1986, and December 1, 1987.

The amendments revise the TS to test only the initiation control circuitry of the reactor building spray system without actually energizing the pump.

A copy of our Safety Evaluation is also enclosed. Notice of issuance of the enclosed amendments will be included in the Commission's bi-weekly Federal Register notice.

Sincerely,

Helen N. Pastis, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II

Enclosures:
1. Amendment No. 171to DPR-38
2. Amendment No. 171to DPR-47
3. Amendment No. 168to DPR-55
4. Safety Evaluation

cc w/enclosures:
See next page

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MRood	HPastis:pw	DMatthews
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3.B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 168, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects - I/II

Attachment:
Technical Specification
Changes

Date of Issuance: October 14, 1988

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FOR THE NUCLEAR REGULATORY COMMISSION

David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects - I/II

Attachment:
Technical Specification
Changes

Date of Issuance: October 14, 1988

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MRood	HPastis:pw	SHLewis	DMatthews
7/26/88	9/28/88	10/7/88	10/13/88

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FOR THE NUCLEAR REGULATORY COMMISSION

David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects - I/II

Attachment:
Technical Specification
Changes

Date of Issuance: October 14, 1988

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PDII-3/DRP-I/II	PDII-3/DRP-I/II	OGC-Rockville	PDII-3/DRP-I/II
MRood	HPastis:pw	SHLewis	DMatthews
1/26/88	9/28/88	10/7/88	10/13/88

50-269/270/287

DATED: October 14, 1988

AMENDMENT NO. 171 TO FACILITY OPERATING LICENSE DPR-38 - Oconee Nuclear Station, Unit 1
AMENDMENT NO. 171 TO FACILITY OPERATING LICENSE DPR-47 - Oconee Nuclear Station, Unit 2
AMENDMENT NO. 168 TO FACILITY OPERATING LICENSE DPR-55 - Oconee Nuclear Station, Unit 3

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

October 14, 1988

Docket Nos.: 50-269, 50-270
and 50-287

Mr. H. B. Tucker, Vice President
Nuclear Production Department
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Tucker:

SUBJECT: ISSUANCE OF AMENDMENT NOS. 171, 171, AND 168 TO FACILITY OPERATING LICENSES DPR-38, DPR-47, and DPR-55 - OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3 (TACS 63541/63542/63543)

The Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 171,171, and 168 to Facility Operating Licenses Nos. DPR-38, DPR-47 and DPR-55 for the Oconee Nuclear Station, Units 1, 2, and 3. These amendments consist of changes to the Technical Specifications (TS) in response to your request dated February 6, 1986, as supplemented August 20, 1986, and December 1, 1987.

The amendments revise the TS to test only the initiation control circuitry of the reactor building spray system without actually energizing the pump.

A copy of our Safety Evaluation is also enclosed. Notice of issuance of the enclosed amendments will be included in the Commission's bi-weekly Federal Register notice.

Sincerely,

for Helen N. Pastis, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II

Enclosures:
1. Amendment No.171 to DPR-38
2. Amendment No.171 to DPR-47
3. Amendment No.168 to DPR-55
4. Safety Evaluation

cc w/enclosures:
See next page

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Raleigh, North Carolina 27603

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

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

DUKE POWER COMPANY

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 171
License No. DPR-38

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment to the Oconee Nuclear Station, Unit 1 (the facility) Facility Operating License No. DPR-38 filed by the Duke Power Company (the licensee) dated February 6, 1986, as supplemented August 20, 1986 and December 1, 1987, 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 set forth in 10 CFR Chapter I;

   D. The issuance of this license 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 hereby amended by page changes to the Technical Specifications as indicated in the attachments 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. 171, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects - I/II

Attachment:
Technical Specification
Changes

Date of Issuance: October 14, 1988

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

DUKE POWER COMPANY

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 171
License No. DPR-47

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment to the Oconee Nuclear Station, Unit 2 (the facility) Facility Operating License No. DPR-47 filed by the Duke Power Company (the licensee) dated February 6, 1986, as supplemented August 20, 1986 and December 1, 1987, 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 set forth in 10 CFR Chapter I;

   D. The issuance of this license 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 hereby amended by page changes to the Technical Specifications as indicated in the attachments 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. 171, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects - I/II

Attachment:
Technical Specification
Changes

Date of Issuance: October 14, 1988

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

DUKE POWER COMPANY

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 168
License No. DPR-55

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment to the Oconee Nuclear Station, Unit 3 (the facility) Facility Operating License No. DPR-55 filed by the Duke Power Company (the licensee) dated February 6, 1986, as supplemented August 20, 1986 and December 1, 1987, 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 set forth in 10 CFR Chapter I;

   D. The issuance of this license 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 hereby amended by page changes to the Technical Specifications as indicated in the attachments 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. 168, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects - I/II

Attachment:
Technical Specification
Changes

Date of Issuance: October 14, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 171

FACILITY OPERATING LICENSE NO. DPR-38

DOCKET NO. 50-269

AND

TO LICENSE AMENDMENT NO. 171

FACILITY OPERATING LICENSE NO. DPR-47

DOCKET NO. 50-270

AND

TO LICENSE AMENDMENT NO. 168

FACILITY OPERATING LICENSE NO. DPR-55

DOCKET NO. 50-287

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change.

Amended Page

4.5-6

4.5-7

4.5.2 Reactor Building Cooling Systems

Applicability

Applies to testing of the Reactor Building Cooling Systems.

Objective

To verify that the Reactor Building Cooling Systems are operable.

Specification

4.5.2.1 System Tests

4.5.2.1.1 Reactor Building Spray System

a. During each refueling outage, a system test shall be conducted to demonstrate proper operation of the system. A test signal will be applied to demonstrate actuation of the Reactor Building Spray System.

b. Station compressed air will be introduced into the spray headers to verify the availability of the headers and spray nozzles at least every five years.

c. The test will be considered satisfactory if visual observation and control board indication verifies that all components have responded to the actuation signal properly; the appropriate pump breakers shall have closed, and all valves shall have completed their travel.

4.5.2.1.2 Reactor Building Cooling System

a. During each refueling outage, a system test shall be conducted to demonstrate proper operation of the system. The test shall be performed in accordance with the procedure summarized below:

   (1) A test signal will be applied to actuate the Reactor Building Cooling System for reactor building cooling operation.

Amendment No. 171 (Unit 1)
Amendment No. 171 (Unit 2)
Amendment No. 168 (Unit 3)

(2) Verification of the engineered safety features function of the Low Pressure Service Water System which supplies coolant to the reactor building coolers shall be made to demonstrate operability of the coolers.

(b) The test will be considered satisfactory if control board indication verifies that all components have responded to the actuation signal properly, the appropriate pump breakers have completed their travel, fans are running at half speed, LPSW flow through each cooler exceeds 1400 GPM and air flow through each fan exceeds 40,000 CFM.

4.5.2.2 Component Tests

4.5.2.2.1 Pumps

The reactor building spray pumps shall be started and operated to verify proper operation in accordance with the requirements of Specification 4.0.4. Acceptable performance will be indicated if the pump starts, operates for 15 minutes, and the measured discharge pressure and flow results in a point above the pump head curve. (Figure 4.5.2-1).

4.5.2.2.2 Valves

Valves of the reactor building spray system will be tested in accordance with the requirements of Specification 4.0.4.

Bases

The Reactor Building Coolant System and Reactor Building Spray System are designed to remove heat in the containment atmosphere to control the rate of depressurization in the containment. The peak transient pressure in the containment is not affected by the two heat removal systems. Hence, the basis for the spray pump flow acceptance test is the flow rate required during recirculation (1,000 gpm).

The delivery capability of one reactor building spray pump at a time can be tested by opening the valve in the line from the borated water storage tank, opening the corresponding valve in the test line, and starting the corresponding pump. Pump discharge pressure and flow indication demonstrate performance.

With the pumps shut down and the borated water storage tank outlet closed, the reactor building spray injection valves can each be opened and closed by operator action. With the reactor building spray inlet valves closed, low pressure air or fog can be blown through the test connections of the reactor building spray nozzles to demonstrate that the flow paths are open.

The equipment, piping, valves, and instrumentation of the Reactor Building Cooling System are arranged so that they can be visually inspected. The cooling units and associated piping are located outside the secondary concrete shield. Personnel can enter the Reactor Building during power operations to inspect and maintain this equipment. The service water piping and valves outside the Reactor Building are inspectable at all times. Operational tests and inspections will be performed prior to initial startup.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 171 TO FACILITY OPERATING LICENSE DPR-38

AMENDMENT NO. 171 TO FACILITY OPERATING LICENSE DPR-47

AMENDMENT NO. 168 TO FACILITY OPERATING LICENSE DPR-55

DUKE POWER COMPANY

OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3

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

1.0 INTRODUCTION

By a February 6, 1986 letter, Duke Power Company (Duke or the licensee) proposed revisions to the Technical Specifications (TSs) of Facility Operating License Nos. DPR-38, DPR-47, and DPR-55 for the Oconee Nuclear Station, Units 1, 2, and 3. These amendments would revise the Station's common TS 4.5.2.1.1(a) on the reactor building spray (RBS) system to test only the initiation control circuitry without actually energizing the pump. Duke proposed to eliminate the need for valve line-up and pump operation; actions which constitute redundant tests to the inservice testing (IST) program at Oconee. By letter dated August 20, 1986, Duke responded to our request for a more substantive evaluation of a no significant hazards consideration. By a December 1, 1987 letter, Duke clarified its original submittal by adding to TS 4.5.2 testing of the RBS valves. This clarification would assure that the testing of the RBS valves would be in accordance with the requirements of subsection IWV, Section XI of the ASME Boiler and Pressure Vessel Code.

2.0 DISCUSSION

The RBS and the reactor building cooling system remove heat from containment following an accident. These systems prevent building pressure from exceeding design pressure. The RBS system serves no function during normal operation. It removes post-accident energy by spraying borated water into the reactor building atmosphere.

The RBS system consists of two pumps, two spray headers, isolation valves, piping, instrumentation, and controls. Each unit's pumps and remotely operated valves can be operated from the control room. The RBS system, with both spray paths in operation, is sized to provide 100 percent of the design cooling capacity. Both paths operate independently; the RBS system operates separately from the reactor building cooling units; and these cooling units independently possess full capacity for post-accident cooling.

To demonstrate proper operation of the system, the present TS 4.5.2.1.1(a) requires Duke to test the RBS system during each refueling outage. To meet the existing TS and demonstrate operability of all system components but without spraying the reactor building, Duke tests each train of the RBS system twice; once with pump power isolated - to verify valve movement; and once with valves

inoperable - to verify pump operation. The TS requires Duke to start the RBS pump and circulate water from the borated water storage tank through the pumps, the test-line, and back to the tank. TS 4.5.2.2.1 requires Duke to start the pumps and operate them to verify proper operation in accordance with the requirements of TS 4.0.4, which references the IST program.

The IST program requires verification of RBS pump operation every three months. The program tests inlet pressure, differential pressure, flow, vibration, lube oil level, and bearing temperature. The program verifies valve operation at least once every refueling outage.

The proposed amendments would eliminate a redundant test of the RBS system by deleting from the TSs the requirement for valve line-up and pump operation; this requirement is a redundant test to the Oconee IST program. The proposed amendments would add to the TSs the requirement for testing the initiation control circuitry only. Testing with the pump breaker in the "TEST" position allows the control circuitry to be tested without actually energizing the pump. Similar type of testing is presently permitted for the high pressure injection system. Furthermore, the proposed amendments would add TS 4.5.2.2.2 to assure that the RBS valves are included in the IST program.

3.0 EVALUATION

TS Section 4.5.2.1.1.a currently requires a signal and flow circulation test during each refueling outage to assure the operability of the RBS system. The proposed TSs would eliminate the flow circulation test which states the following: "Water will be circulated from the borated water storage tank through the reactor building spray pumps and returned through the test line to the borated water storage tank." Duke indicated that the valve and pump testing in the IST program assures the operability of the RBS system.

Specifically, TS Section 4.5.2.2.1 requires the pumps in the RBS system to be tested pursuant to TS Section 4.0.4, surveillance requirements for inservice testing of ASME Class 1, 2, and 3 components. The proposed TS Section 4.5.2.2.2 adds the requirement that the valves in the RBS system will also be tested in accordance with the requirements of TS Section 4.0.4. The Oconee IST program requires verification of RBS system pump operation every three months. The capability of the RBS pump to deliver water can be tested by opening the corresponding valve in the test line and starting the pump. Pump discharge pressure and flow indication will demonstrate the system flow performance. Therefore, the required flow circulation test in current TS Section 4.5.2.1.1.a to verify the operability of the system is redundant to normal testing per the IST program when the pumps and valves in the system are required to be tested per the IST program as specified in TS Section 4.0.4.

Therefore, we find acceptable Duke's proposed TSs on the RBS system: (1) to delete the flow circulation test from TS 4.5.2.1.1.a; and (2) to add valve testing in accordance with the IST program to TS 4.5.2.2.2.

4.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of facility components 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 previously issued a proposed finding that these amendments involve no significant hazards consideration, and there has been no public comment on such finding. Accordingly, the 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.

5.0 CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (52 FR 16941) on May 6, 1987, and consulted with the state of South Carolina. No public comments were received, and the state of South Carolina did not have any comments.

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.

Principal Contributor: H. N. Pastis, PD#II-3/DRP-I/II
C. Li, SPLB/NRR

Dated: October 14, 1988