

December 13, 1989

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. 179, 179, AND 176 TO FACILITY OPERATING  
LICENSES DPR-38, DPR-47, and DPR-55 - OCONEE NUCLEAR STATION,  
UNITS 1, 2, AND 3 (TACS 74093/74094/74095)

The Nuclear Regulatory Commission has issued the enclosed Amendment Nos.  
179, 179, and 176 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  
July 14, 1989.

The amendments revise TS 4.8.2 to delete requirements to leak rate test  
the main steam stop valves during each refueling outage.

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

Sincerely,

/s/

Leonard A. Wiens, Project Manager  
Project Directorate II-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No.179 to DPR-38
2. Amendment No.179 to DPR-47
3. Amendment No.176 to DPR-55
4. Safety Evaluation

OFOI  
1/1

cc w/enclosures:  
See next page

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Mr. H. B. Tucker  
Duke Power Company

Oconee Nuclear Station  
Units Nos. 1, 2 and 3

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Honorable James M. Phinney  
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DATED: December 13, 1989

AMENDMENT NO. 179 TO FACILITY OPERATING LICENSE DPR-38 - Oconee Nuclear Station, Unit 1  
AMENDMENT NO. 179 TO FACILITY OPERATING LICENSE DPR-47 - Oconee Nuclear Station, Unit 2  
AMENDMENT NO. 176 TO FACILITY OPERATING LICENSE DPR-55 - Oconee Nuclear Station, Unit 3

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R. Ingram	14-H-25
L. Wiens	14-H-25
OGC-WF	15-B-18
C. McCracken	8-D-1
E. Jordan	MNBB-3302
W. Jones	P-130A
G. Hill (12)	P1-137
ACRS (10)	P-135
GPA/PA	17-F-2
ARM/LFMB	AR-2015
E. Butcher	11-F-23
D. Hagan	MNBB-3302



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. 179  
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 July 14, 1989, 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 attachment to this license amendment, and Paragraph 3.B. of Facility Operating License No. DPR-38 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 179, 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

*Katherine N. Jablon for*

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

Attachment:  
Technical Specification  
Changes

Date of Issuance: December 13, 1989



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. 179  
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 July 14, 1989, 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 attachment to this license amendment, and Paragraph 3.B. of Facility Operating License No. DPR-47 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 179, 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

*Keith N. Talbot for*

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

Attachment:  
Technical Specification  
Changes

Date of Issuance: December 13, 1989



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. 176  
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 July 14, 1989, 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 attachment to this license amendment, and Paragraph 3.B. of Facility Operating License No. DPR-55 is hereby amended to read as follows:



Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 176, 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

*Kalita N. Tallon for*

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

Attachment:  
Technical Specification  
Changes

Date of Issuance: December 13, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 179

FACILITY OPERATING LICENSE NO. DPR-38

DOCKET NO. 50-269

AND

TO LICENSE AMENDMENT NO. 179

FACILITY OPERATING LICENSE NO. DPR-47

DOCKET NO. 50-270

AND

TO LICENSE AMENDMENT NO. 176

FACILITY OPERATING LICENSE NO. DPR-55

DOCKET NO. 50-287

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

Amended Page

4.8-1

#### 4.8 MAIN STEAM STOP VALVES

##### Applicability

Applies to the main steam stop valves.

##### Objective

To verify the ability of the main steam stop valves to close upon signal.

##### Specification

4.8 Using Channels A and B, the operation of each of the main steam stop valves shall be tested during each refueling outage to demonstrate a closure time of one second or less in Channel A and a closure time of 15 seconds or less for Channel B.

##### Bases

The main steam stop valves limit the Reactor Coolant System cooldown rate and resultant reactivity insertion following a main steam line break accident. Their ability to promptly close upon redundant signals will be verified during each refueling outage. Channel A solenoid valves are designed to close all four turbine stop valves in 240 milliseconds. The backup Channel B solenoid valves are designed to close the turbine stop valves in approximately 12 seconds.

Using the maximum 15 second stop valve closing time, the fouled steam generator inventories and the minimum tripped rod worth with the maximum stuck rod worth, an analysis similar to that presented in FSAR Section 15.13, (but considering a blowdown of both steam generators) shows that the reactor will remain sub-critical after reactor trip following a double-ended steam line break.

##### REFERENCES

(1) FSAR, Section 10.3.4, and 15.13



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO.179 TO FACILITY OPERATING LICENSE DPR-38  
AMENDMENT NO.179 TO FACILITY OPERATING LICENSE DPR-47  
AMENDMENT NO.176 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

In a letter dated June 28, 1989, Duke Power Company requested relief from the requirements of Technical Specification (TS) 4.8.2, Main Steam Stop Valves, for the Oconee Nuclear Station, Unit 2. This TS specifies leakage rate testing of the main steam stop valves (MSSVs) during each refueling outage. Relief from the TS was requested on the basis of the testing being unnecessary to demonstrate operability of the MSSVs. Enforcement discretion was granted by the NRC as documented in a letter from Stewart Ebner to H. B. Tucker dated July 10, 1989. The licensee subsequently requested a TS amendment to delete the MSSV leak rate testing for all three Oconee units in a letter dated July 14, 1989.

2.0 EVALUATION

The Main Steam System (MSS) design for the three Oconee units does not include main steam isolation valves (MSIVs) for steam generator or steam line isolation. In this design, the MSSVs, also referred to as turbine stop valves, perform this isolation function. For each steam generator, two MSSVs are installed in parallel and must shut to isolate the steam generator. The safety function served by the MSSVs is to prevent simultaneous blowdown of both steam generators following a steam line rupture in one steam line.

The current TS specifies that the MSSVs be leak rate tested at 59 psig during each refueling outage, with a leakage rate limit of 25 cubic feet per hour. The basis for this leak rate test provided in the TS basis is a simultaneous break of a reactor coolant line and a steam generator feedwater header, resulting in a containment atmosphere leakage path through the feedwater header, into the steam generator and out through the main steam line. The feedwater lines and feedrings at Oconee are seismically designed, and the reactor coolant system piping design minimizes the possibility of a rupture of the feedring or feedwater line as a result of a reactor coolant piping break. As such, the NRC staff concurs with the licensee's determination that a concurrent break of the reactor coolant piping and the steam generator feedring or feedwater line is not a credible accident scenario.

The main steam lines are also seismically qualified from the steam generator up to and including the MSSVs. As such, these lines are considered a closed system not exposed to containment atmosphere in a post-accident condition and, therefore, do not require local leak rate testing under 10 CFR 50, Appendix J. Also, Appendix J, Section II.H., requires the testing of containment isolation valves in main steam and feedwater piping, but only in boiling water reactors, not in pressurized water reactors.

In order to perform their safety function, the MSSVs must shut when required and within the time required. This function is tested in accordance with TS 4.8.1 which requires a timed stroke test each refueling outage. Closure of the MSSVs prevents excessive cooling of the reactor following a steam line break and limits the release of activity to the atmosphere for a steam line break with 1% failed fuel and a 1 gallon per minute primary to secondary leak in the faulted steam generator. Closure of the MSSVs is also required to isolate the faulted steam generator during a steam generator tube rupture. In each of these scenarios, prompt closure of the MSSVs is necessary to remain within the bounds of the current design basis analysis. However, seat tightness of these valves is not required, in that any credible leakage through these valves, when shut, would be insignificant compared to the release through the ruptured steam line. As such, the NRC staff concurs with the licensee that leak testing of the MSSVs at Oconee is unnecessary.

### 3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in surveillance requirements. 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.

### 4.0 CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (54 FR 32709) on August 9, 1989, 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: L. Wiens, PDII-3/DRP-I/II

Dated: December 13, 1989