



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

February 7, 1980

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

Mr. William O. Parker, Jr.  
Vice President - Steam Production  
Duke Power Company  
P. O. Box 2178  
422 South Church Street  
Charlotte, North Carolina 28242

Dear Mr. Parker:

The Commission has issued the enclosed Amendments Nos. 75, 79 and 76 for 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 (TS) and are in response to your request dated December 21, 1979.

These amendments revise the TS by delaying the irradiation of an Oconee Unit No. 3 material surveillance capsule in the host Crystal River Unit No. 3 (CR-3) reactor from CR-3's third cycle to its sixth cycle of operation. CR-3 will also be the host reactor for Three Mile Island Unit No. 1 (TMI-1) material surveillance capsules. A TMI-1 capsule will be substituted for the Oconee Unit No. 3 capsule.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

A handwritten signature in cursive script that reads "Robert W. Reid".

Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

Enclosures:

1. Amendment No. 79 to DPR-38
2. Amendment No. 79 to DPR-47
3. Amendment No. 76 to DPR-55
4. Safety Evaluation
5. Notice

cc w/enclosures: See next page

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Duke Power Company

cc w/enclosure(s):

Mr. William L. Porter  
Duke Power Company  
P. O. Box 2178  
422 South Church Street  
Charlotte, North Carolina 28242

Mr. Robert B. Borsum  
Babcock & Wilcox  
Nuclear Power Generation Division  
Suite 420, 7735 Old Georgetown Road  
Bethesda, Maryland 20014

Oconee Public Library  
201 South Spring Street  
Walhalla, South Carolina 29691

Manager, LIS  
NUS Corporation  
2536 Countryside Boulevard  
Clearwater, Florida 33515

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

cc w/enclosure(s) and incoming dtd:  
12/21/79

Director, Technical Assessment  
Division  
Office of Radiation Programs  
(AW-459)  
U. S. Environmental Protection Agency  
Crystal Mall #2  
Arlington, Virginia 20460

Office of Intergovernmental Relations  
116 West Jones Street  
Raleigh, North Carolina 27603

U. S. Environmental Protection Agency  
Region IV Office  
ATTN: EIS COORDINATOR  
345 Courtland Street, N.E.  
Atlanta, Georgia 30308

Mr. Francis Jape  
U. S. Nuclear Regulatory Commission  
P. O. Box 7  
Seneca, South Carolina 29678



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. 79  
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) dated December 21, 1979, 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. 79 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: FEBRUARY 07 1980



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. 79  
License No. DPR-47

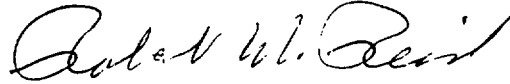
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Duke Power Company (the licensee) dated December 21, 1979, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and 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. 79 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: FEBRUARY 07 1980



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. 76  
License No. DPR-55

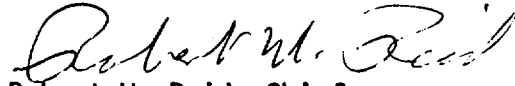
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Duke Power Company (the licensee) dated December 21, 1979, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and 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. 76 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: FEBRUARY 07 1980



ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 79 TO DPR-38

AMENDMENT NO. 79 TO DPR-47

AMENDMENT NO. 76 TO DPR-55

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

Revise Appendix A as follows:

Remove Page

4.2-4

Insert Page

4.2-4

Changes on the revised page are indicated by a marginal line.

Table 4.2-1

OCONEE NUCLEAR STATION CAPSULE ASSEMBLY  
WITHDRAWAL SCHEDULE AT CRYSTAL RIVER UNIT NO. 3

<u>Capsule Designation</u>	<u>Insertion</u>	<u>Withdrawal</u>
OCI-A	End of 1st Cycle	End of 7th Cycle
OCI-B	End of 7th Cycle	End of 16th Cycle
OCI-C	End of 2nd Cycle	End of 11th Cycle
OCI-D	End of 9th Cycle	End of 18th Cycle
OCII-A	End of 1st Cycle	End of 2nd Cycle
OCII-B	End of 4th Cycle	End of 9th Cycle
OCII-D	End of 9th Cycle	End of 18th Cycle
OCII-E	End of 1st Cycle	End of 9th Cycle
OCII-F	End of 9th Cycle	End of 18th Cycle
OCIII-B	End of 1st Cycle	End of 2nd Cycle
OCIII-C	End of 5th Cycle	End of 10th Cycle
OCIII-D	End of 1st Cycle	End of 9th Cycle
OCIII-E	End of 5th Cycle	End of 18th Cycle
OCIII-F	End of 11th Cycle	End of 20th Cycle

NOTE: OCI - Capsules are from Unit No. 1  
 OCII - Capsules are from Unit No. 2  
 OCIII - Capsules are from Unit No. 3

Amendments Nos. 79, 79 , and 76



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 79 TO FACILITY OPERATING LICENSE NO. DPR-38

AMENDMENT NO. 79 TO FACILITY OPERATING LICENSE NO. DPR-47

AMENDMENT NO. 76 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

Introduction

By letter dated December 21, 1979, Duke Power Company (the licensee) proposed a modification to Technical Specification (TS) Table 4.2-1 of the Station's common TSs. The submittal proposes to delay by three cycles the material surveillance insertion and withdrawal schedule for Oconee Unit No. 3 capsule OCIII-C in Crystal River Unit No. 3 (CR-3), the host reactor. The rescheduling is necessary to accommodate irradiation requirements for Three Mile Island Unit No. 1 (TMI-1) which also will use CR-3 as the host reactor for material surveillance capsules.

Background

Neutron irradiation causes the reactor vessel material reference nil ductility temperature,  $RT_{NDT}$ , to increase with time and the material fracture toughness properties to decrease with time. These irradiation properties are used to establish pressure-temperature operating limits in accordance with Appendix G, 10 CFR Part 50.

10 CFR Part 50, Appendix H, "Reactor Vessel Material Surveillance Program Requirements", requires a material surveillance program for reactor vessels to monitor changes in the fracture toughness properties of ferritic materials in the vessel beltline region resulting from their exposure to neutron irradiation and the thermal environment. Under this program, fracture toughness test data are obtained from material specimens periodically withdrawn from the reactor vessel. This Appendix gives withdrawal schedules based on the amount of radiation damage predicted at the end of the service lifetime of the vessel. For the Oconee 3 reactor vessel, Appendix H requires a five capsule surveillance program. Oconee 3 has a six capsule surveillance program and thus exceeds the Appendix H requirement. On July 14, 1977, we authorized an exemption to the Appendix H requirements which allowed Oconee surveillance specimens to be irradiated in a host facility of similar design, CR-3. The exemption was authorized for a period of five years. At that time, guidance was given on the procedure to follow in the event an extension of the initial exemption period is required.

## Evaluation

The Oconee 3 material surveillance program is part of the Babcock and Wilcox (B&W) integrated surveillance program. Our safety evaluation dated July 14, 1977, discusses this program and its application to the Oconee units. The B&W 177FA integrated reactor vessel surveillance program uses three host reactors (CR-3, Davis-Besse 1, and TMI-2) to irradiate the surveillance capsules for the other six 177 FA reactors (Oconee Units 1, 2 and 3, TMI-1, Arkansas Nuclear One Unit 1, and Rancho Seco). Prior to the TMI-2 incident, TMI-2 had been serving as the host reactor for the TMI-1 capsules. In order that TMI-1 will have an ongoing reactor vessel surveillance program in the event of its restart, it is planned to irradiate a TMI-1 capsule in the CR-3 host reactor since TMI-2 is not available. The insertion of the TMI-1 capsule at CR-3 is scheduled to take place at the end of the current CR-3 fuel cycle (March 1980). This will cause a delay in the irradiation of Oconee 3 capsule OCIII-C. The OCIII-C capsule was scheduled to be irradiated during the third through the seventh cycle of CR-3 and now it is proposed to be irradiated during the sixth through the tenth cycle.

One capsule, OCIII-A, has been withdrawn from the Oconee reactor vessel and tested. This capsule received a fluence of  $7.39 \times 10^{17}$  n/cm<sup>2</sup>. The present pressure-temperature limits for Oconee 3 are applicable to four effective full power years (EFPY) and are based on the test results obtained on this capsule. Capsule OCIII-B is scheduled to be withdrawn from CR-3 at the end of the current CR-3 cycle. The estimated fluence on this capsule will be  $3.9 \times 10^{18}$  n/cm<sup>2</sup>. This fluence corresponds to about 10 EFPY on the vessel at the one quarter from inside the reactor wall depth location. Thus, the test results on this capsule can be used to calculate the pressure-temperature limits for Oconee 3 to 10 EFPY. Capsule OCIII-D was placed in the CR-3 reactor vessel at the end of the first cycle and is scheduled to be removed at the end of the ninth cycle. Test data on this capsule should be available before the Oconee 3 reactor vessel reaches 10 EFPY. If the data are needed before the end of Cycle 9 at CR-3 is reached, we will require that the capsule be withdrawn at an earlier date. Therefore, we conclude that the delay in the irradiation schedule of the Oconee 3 capsule OCIII-C will have no adverse effect on the Oconee 3 material surveillance program and thus the proposed delay is acceptable. We find that the proposed withdrawal schedule is in accordance with Appendix H, 10 CFR Part 50.

## Environmental Consideration

We have determined that the amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments .

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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: February 7, 1980

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKETS NOS. 50-269, 50-270 AND 50-287DUKE POWER COMPANYNOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY  
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendments Nos. 79 , 79 , and 76 to Facility Operating Licenses Nos. DPR-38, DPR-47 and DPR-55, respectively, issued to Duke Power Company, which revised the Technical Specifications for operation of the Oconee Nuclear Station, Units Nos. 1, 2 and 3, located in Oconee County, South Carolina. The amendments are effective as of the date of issuance.

These amendments revise the Technical Specifications by delaying the irradiation of an Oconee Unit No. 3 material surveillance capsule in the host Crystal River Unit No. 3 reactor from Crystal River Unit 3's third cycle to its sixth cycle of operation. This rescheduling is necessary to accommodate irradiation requirements for another reactor due to unavailability of its original host, Three Mile Island Unit No. 2.

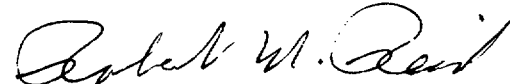
The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission had made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

For further details with respect to this action, see (1) the application for amendments dated December 21, 1979, (2) Amendments Nos. 79 , 79 , and 76 to Licenses Nos. DPR-38, DPR-47 and DPR-55, respectively, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D. C. and at the Oconee County Library, 201 South Spring Street, Walhalla, South Carolina. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 7th day of FEBRUARY 1980

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors