

JUN 25 1976

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

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

Gentlemen:

By letter dated May 7, 1976, you requested an exemption from the requirements of 10 CFR Part 50, Appendix H, Section II.C.2 to permit the operation of Oconee Unit No. 2, cycle 2, with the reactor vessel surveillance specimens removed from the reactor vessel. You additionally requested corresponding Technical Specification changes to reflect the removal of the surveillance capsules during cycle 2 and to establish provisions to revise the capsule withdrawal schedule prior to cycle 3 operation.

We have concluded that if the reactor vessel surveillance capsules are removed from Oconee Unit No. 2 for cycle 2 operation, the reactor vessel surveillance program would continue to fulfill the purpose of 10 CFR Part 50, Appendix H.

An exemption to the requirements of Section II.C.2 of Appendix H is therefore granted for Oconee Unit No. 2 and operation with the surveillance capsules removed for cycle 2 operation is hereby authorized. In addition, the Commission has issued the enclosed Amendments Nos. \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ for Licenses DPR-38, DPR-47 and DPR-55, for the Oconee Nuclear Station, Units 1, 2 and 3. These amendments provide for the removal of the surveillance capsules for Unit 2 cycle 2 operation and require that the capsule withdrawal schedule be revised prior to cycle 3.

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Duke Power Company

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Copies of the Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,

Victor Stello, Jr., Director  
Division of Operating Reactors  
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. to License No. DPR-38
- 2. Amendment No. to License No. DPR-47
- 3. Amendment No. to License No. DPR-55
- 4. Safety Evaluation
- 5. Federal Register Notice

cc w/enclosures:  
See next page

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Duke Power Company

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June 25, 1976

cc w/enclosures:

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

Mr. Troy B. Conner  
Conner & Knotts  
1747 Pennsylvania Avenue, NW  
Washington, D. C. 20006

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

Honorable Reese A. Hubbard  
County Supervisor of Oconee County  
Walhalla, South Carolina 29621

cc w/enclosures and incoming:

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



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

DUKE POWER COMPANY

DOCKET NO. 50-269

OCONEE NUCLEAR STATION; UNIT 1

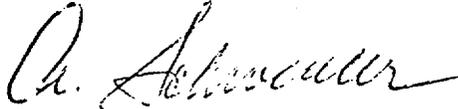
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 26  
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 May 7, 1976, 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.
3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: June 25, 1976



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. 26  
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 May 7, 1976, 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.
3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: June 25, 1976



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. 23  
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 May 7, 1976, 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.
3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: June 25, 1976

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 26 TO DPR-38

AMENDMENT NO. 26 TO DPR-47

AMENDMENT NO. 23 TO DPR-55

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

Revise Appendix A as follows:

Remove page 4.2-3 and insert 4.2-3 revised page.

4.2.10 For Unit 1, Cycle 3 operation, the surveillance capsules will be removed from the reactor vessel and the provisions of Specification 4.2.9 will be revised prior to Cycle 4 operation. For Unit 2, Cycle 2 operation, the surveillance capsules will be removed from the reactor vessel and the provisions of Specification 4.2.9 will be revised prior to Cycle 3 operation. For Unit 3, Cycle 1 operation, the surveillance capsules will be removed from the reactor vessel for a portion of the cycle and the provisions of Specification 4.2.9 will be revised prior to Cycle 2 operation.

4.2.11 During the first two refueling periods, two reactor coolant system piping elbows shall be ultrasonically inspected along their longitudinal welds (4 inches beyond each side) for clad bonding and for cracks in both the clad and base metal. The elbows to be inspected are identified in B&W Report 1364 dated December 1970.

### Bases

The surveillance program has been developed to comply with Section XI of the ASME Boiler and Pressure Vessel Code, Inservice Inspection of Nuclear Reactor Coolant Systems, 1970, including 1970 winter addenda, edition. The program places major emphasis on the area of highest stress concentrations and on areas where fast neutron irradiation might be sufficient to change material properties.

The reactor vessel specimen surveillance program for Unit 1 and Unit 2 is based on equivalent exposure times of 1.8, 19.8, 30.6 and 39.6 years. The contents of the different type of capsules are defined below.

#### A Type

Weld Material  
HAZ Material  
Baseline Material

#### B Type

HAZ Material  
Baseline Material

For Unit 3, the Reactor Vessel Surveillance Program is based on equivalent exposure times of 1.8, 13.3, 26.7, and 30.0 years. The specimens have been selected and fabricated as specified in ASTM-E-185-72.

Early inspection of Reactor Coolant System piping elbows is considered desirable in order to reconfirm the integrity of the carbon steel base metal when explosively clad with sensitized stainless steel. If no degradation is observed during the two annual inspections, surveillance requirements will revert to Section XI of the ASME Boiler and Pressure Vessel Code.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 26 TO FACILITY LICENSE NO. DPR-38

AMENDMENT NO. 26 TO FACILITY LICENSE NO. DPR-47

AMENDMENT NO. 23 TO FACILITY LICENSE NO. DPR-55

DUKE POWER COMPANY

OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3

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

Introduction

By letter dated May 7, 1976, Duke Power Company (the licensee) requested an exemption from the requirements of 10 CFR Part 50, Appendix H, Section II.C.2 to permit the operation of Oconee Unit No. 2 during cycle 2 with the reactor vessel surveillance capsules removed from the reactor vessel. The licensee requested corresponding changes to the Technical Specifications appended to Facility Operating Licenses Nos. DPR-38, DPR-47 and DPR-55 for the Oconee Nuclear Station, Units Nos. 1, 2 and 3. These changes would reflect the removal of the reactor vessel surveillance capsules during Unit No. 2 cycle 2 operation and would require the submittal of a revised surveillance capsule withdrawal schedule prior to Unit No. 2 cycle 3.

Discussion

The Oconee Unit No. 2 design includes three reactor vessel surveillance capsule holder tubes located adjacent to the reactor vessel inside wall. Each holder tube contains two surveillance capsules which hold the specimens to be irradiated in accordance with the requirements of the reactor vessel material surveillance program, as described in Appendix H to 10 CFR Part 50. The purpose of the surveillance program is to monitor changes in the fracture toughness properties of ferritic materials in the reactor vessel beltline region resulting from exposure to neutron irradiation and the thermal environment.

By letter dated March 16, 1976, the licensee indicated awareness of damage to the reactor vessel surveillance holder tubes at another B&W reactor. In order to minimize the possibility of similar damage to the Oconee Unit No. 2 surveillance holder tubes, the licensee has proposed to remove the reactor vessel surveillance capsules and holder tubes for cycle 2 operation.

### Evaluation

As required by Paragraph II.C.2 of Appendix H to 10 CFR Part 50, the surveillance capsules of Oconee Unit No. 2 are positioned during reactor operation such that the neutron flux received by the specimens is at least as high as but not more than three times as high as that received by the reactor vessel inner surface. More specifically, as reported in Babcock and Wilcox Topical Report BAW-10100A, February 1975, the specimen capsule locations in the Unit No. 2 reactor vessel provide a neutron flux 2.4 times greater than the inside 1/4 wall thickness (1/4t) location of the reactor vessel beltline. This causes the integrated neutron flux (or fluence) of the specimens to accumulate faster or "lead" the fluence to but not more than three times greater than that received by the reactor vessel inner surface. More specifically, as reported in Babcock and Wilcox Topical Report BAW-10100A, February 1975, the specimen capsule locations in the Unit No. 2 reactor vessel provide a neutron flux 2.4 times greater than the inside 1/4 wall thickness (1/4t) location of the reactor vessel beltline. This causes the integrated neutron flux (or fluence) of the specimens to accumulate faster or "lead" the fluence accumulating in the vessel wall itself. This lead factor between the center of the specimens and the 1/4t vessel wall location is considered when determining the relative fracture toughness properties of the beltline region materials. Although Oconee Unit No. 2 has currently accumulated only 1.21 effective full power years (EFPY) of exposure at the vessel wall, the capsule specimens have accumulated an exposure equivalent to 2.90 EFPY. Since operation to the end of Oconee Unit No. 2, cycle 2 will produce a total of 2.04 EFPY we conclude that there is ample margin between the fluence already accumulated in capsule specimens when compared to the maximum achievable exposure to be accumulated at the 1/4t reactor vessel beltline location by the end of cycle 2 operation. The irradiation effects accumulated by the specimens during cycle 1 operation can with proper storage condition be preserved unaltered and appropriate allowances can be made to review the capsule withdrawal schedule and thus insure that the required data is obtained. In addition, as required by section 4.2.9 of the Oconee Technical Specifications, a type B capsule was removed from Oconee Unit No. 2 during the current outage. The results of the analyses conducted on the specimens in the capsule will be included in the licensee's revised Unit No. 2 withdrawal schedule which is expected to be submitted at least 90 days in advance of Cycle 3 operation. Based on the above we conclude that the licensee's proposed action to remove the Unit No. 2 reactor vessel surveillance capsules during Cycle 2 operation only, will not adversely affect the overall Unit No. 2 surveillance program being relied upon to ensure the lifetime ductility of the reactor pressure vessel.

Denial of the exemption request would prevent operation of the plant until the surveillance capsule holder assemblies are reinstalled. The licensee indicates that replacement of the redesigned holder tubes cannot be accomplished before September 1976. The licensee has orally advised us that the shutdown of Unit No. 2 until September would result in substantial additional generating costs that would be reflected in increased customer rates. Balancing these substantial certain added costs against the lack of an identified safety benefit to be gained from not granting the requested exemption we conclude that granting of the exemption request is in the public interest.

In summary, we have concluded that the licensee's request for exemption from the requirements of 10 CFR 50, Appendix H, is authorized by law; will not endanger life or property or the common defense and security and is otherwise in the public interest.

#### 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 statement, negative declaration, or 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 change does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the change does 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.

Date: June 25, 1976

UNITED STATES NUCLEAR REGULATORY COMMISSION

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

DUKE POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY  
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment Nos. 26, 26, and 23 to Facility Operating Licenses Nos. DPR-38, DPR-47, and DPR-55, respectively, issued to Duke Power Company which revised Technical Specifications for operation of the Oconee Nuclear Station Unit Nos. 1, 2, and 3 located in Oconee County, South Carolina. The amendments are effective as of the date of issuance.

These amendments result from an exemption granted from the requirements of 10 CFR Part 50, Appendix H, "Reactor Vessel Material Surveillance Program Requirements," and provide for the removal of the reactor vessel surveillance capsules for Unit No. 2 cycle 2 operation and require that the capsule withdrawal schedule be revised prior to cycle 3.

The application for these 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 has 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.

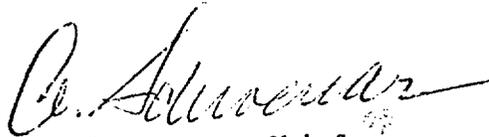
The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with issuance of these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

For further details with respect to this action, see (1) the application for amendments dated May 7, 1976, (2) Amendment Nos. 26, 26 and 23 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. 20555 and at the Oconee County Library, 201 South Spring, Walhalla, South Carolina 29691.

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 25 day of June 1976.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors