

Socket file

OCT 23 1976

Dockets Nos. 50-269/270/287

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

Gentlemen:

By letter dated September 24, 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 3 during 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 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 for Oconee Unit 3 during 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 3 and operation with the surveillance capsules removed during Cycle 2 operation is hereby authorized. In addition, the Commission has issued the enclosed Amendments Nos. 35, 35 and 32, for the Oconee Nuclear Station, Units Nos. 1, 2 and 3. These amendments which revise page 4.2.3 of the common Technical Specifications provide for the removal of the surveillance capsules during Unit 3 Cycle 2 operation and require that the capsule withdrawal schedule be revised prior to Cycle 3.

Sincerely,

Original signed by

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

Enclosures and cc:
See next page

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OCT 23 1976

- Enclosures:
1. Amendment No. 35 to DPR-38
 2. Amendment No. 35 to DPR-47
 3. Amendment No. 38 to DPR-55
 4. Safety Evaluation
 5. Federal Registration Notice

CC w/ encl:
See next page

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

DUKE POWER COMPANY

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT NO. 1

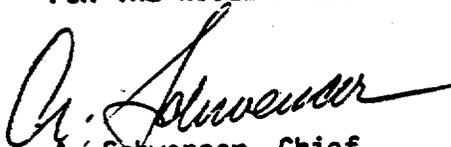
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 35
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 September 24, 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: October 23, 1976



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. 35
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 September 24, 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: October 23, 1976



**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. 32
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 September 24, 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: October 23, 1976

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 35 TO DPR-38

AMENDMENT NO. 35 TO DPR-47

AMENDMENT NO. 32 TO DPR-55

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

Revise Appendix A as follows:

Remove page 4.2.3 and insert revised page 4.2.3.

- 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 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.
- 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.
- 4.2.12 To assure that reactor internals vent valves are not opening during operation, all vent valves will be inspected during each refueling outage to confirm that no vent valve is stuck open and that each valve operates freely.

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.

<u>A Type</u>	<u>B Type</u>
Weld Material	HAZ Material
HAZ Material	Baseline 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. 35 TO FACILITY LICENSE NO. DPR-38

AMENDMENT NO. 35 TO FACILITY LICENSE NO. DPR-47

AMENDMENT NO. 32 TO FACILITY 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 September 24, 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 3 during Cycle 2 with the reactor vessel surveillance capsules removed from the reactor vessel. The licensee also requested a corresponding change 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. This change would reflect the removal of the Unit 3 reactor vessel surveillance capsules for Cycle 2 operation and would require the submittal of a revised surveillance capsule withdrawal schedule prior to Unit 3 Cycle 3 operation.

Discussion

The Oconee Unit 3 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 material in the reactor vessel beltline region resulting from their exposure to neutron irradiation and the thermal environment.

During the refueling shutdown of Oconee Unit 1 in March 1976, evidence of wear was noted at various locations of the surveillance capsule holder tubes. Subsequent inspections of the holder tubes in Oconee Units 2 and 3 revealed similar wear. The licensee decided to remove the surveillance capsules and holddown assemblies from each of the three units and in the case of Units 1 and 2, the holder tubes were also removed to preclude the possibility of further wear occurring due to flow induced stresses during operation. To allow continued operation with the surveillance capsules removed, the licensee justified, and was granted exemptions to the requirements of Appendix H to 10 CFR Part 50 for Oconee Units 1, 2 and 3 by letters dated March 26, June 25 and April 16, 1976, respectively.

The exemption granted for Oconee Unit 3 expired at the completion of Cycle 1 operation on September 18, 1976. The holder tubes which had remained in the reactor vessel for the period of the exemption are being removed during the current refueling outage. The licensee had expected that a redesigned holder tube would have been qualified for use in Unit 3 during Cycle 2 operation, however, due to delays in the qualification program, the redesigned holder tube is not expected to be qualified and approved for use before January 1977, at the earliest. Oconee Unit 3 however, has been scheduled to restart following refueling for Cycle 2 operation in early November 1976. The licensee has therefore requested an exemption from the requirements of Appendix H to allow operation of Unit 3 during Cycle 2 with the surveillance capsules removed from the reactor vessel.

Evaluation

As required by Paragraph II.C.2 of Appendix H to 10 CFR Part 50, the surveillance capsules of Oconee Unit 3 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 vessel inner surface. More specifically, as reported in Babcock and Wilcox Topical Report BAW-10100A, February 1975, the specimen capsule locations in the Unit 3 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. The 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. The Safety Evaluation supporting the exemption to Appendix H granted for Oconee Unit 3 on April 16, 1976, indicated that the irradiation accumulated by the specimens in the capsules removed at that time was 2.30 Effective Full Power Years (EFPY). This accumulation provided considerable margin to the maximum expected exposure of the reactor vessel beltline region

at the completion of Cycle 1 operation, 1.33 EFPY. In its letter of September 24, 1976, the licensee has predicted that the specimens will continue to lead the reactor vessel exposure which at the completion of Cycle 2 operation will only be 2.03 EFPY. The specimens of one of the capsules removed in April 1976 are being analyzed as part of the reactor vessel surveillance program and will provide data for establishing the revised withdrawal schedule prior to commencement of Cycle 3 operation.

The irradiation effects accumulated by the specimens of the other capsules removed from the Unit 3 reactor vessel will not be altered and appropriate allowances can be made to account for the time that they are removed from the vessel. Based on the above we conclude that the licensee's proposed action to operate Oconee Unit 3 during Cycle 2 with the surveillance capsules removed will not adversely affect the Unit 3 surveillance program and presents no danger to the public health and safety.

By letter dated October 19, 1976, the licensee stated that it is his intention to comply with the regulations established in 10 CFR 50, Appendix H or to propose a technically acceptable alternative for NRC approval prior to operation of Cycle 3. This exemption is being granted on the condition that after Cycle 2 and prior to operation of Cycle 3, the licensee will comply with the Commission's regulations on surveillance requirements existing at that time.

Should the exemption request be denied, operation of the plant would be prohibited until the redesigned surveillance capsule holder tube assembly can be made available and approved for use. This would result in Unit 3 being shut down for at least three months. The licensee, by letter dated October 19, 1976, stated that a delay of three months would result in increased generation costs of at least fourteen million dollars. Balancing these substantial certain added costs against the lack of an identified safety benefit to be gained from not granting the exemption, we conclude that granting of the exemption is in the public interest.

In summary, we have concluded that the licensee's request for exemption from the requirements of 10 CFR Part 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 these 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 these 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 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.

Date: October 23, 1976

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKETS NOS. 50-269, 50-270 AND 50-207

DUKE POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued

Amendments Nos. 35, 35 and 32 to Facility operating licenses Nos. DPR-38,

DPR-47 and DPR-55 issued to Duke Power Company (the licensee) which revised

Technical Specifications for operation of the Oconee Nuclear Station, Units

Nos. 1, 2 and 3 (the facility) located in Oconee County, South Carolina.

The amendments are effective as of its date of issuance.

These amendments result from an Oconee Unit 3 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 3, Cycle

2 operation and require that the Unit 3 capsule withdrawal schedule be

revised prior to Unit 3 Cycle 3 operation.

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.

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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 issuance of these amendments.

For further details with respect to this action, see (1) the application for amendments dated September 24, 1976, (2) Amendments Nos. 35, 36 and 32 to Licenses Nos. DPR-38, DPR-47 and DPR-55, 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, Maitland, 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 day of

FOR THE NUCLEAR REGULATORY COMMISSION

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

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