

AUG 15 1975

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

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:

The Commission has issued the enclosed Amendment No. 11, Technical Specification Change No. 2 for License No. DPR-38; Amendment No. 11, Technical Specification Change No. 7 for License No. DPR-47; and Amendment No. 8, Technical Specification Change No. 8 for License No. DPR-55, for the Oconee Nuclear Station, Units 1, 2 and 3. These amendments are in response to your request dated March 12, 1975, and subsequent letters dated April 16 and June 19, 1975.

These amendments delete the definition of Refueling Period and change several equipment surveillance items previously related to the refueling period definition.

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

Sincerely,

1st TV Wambach for

Robert A. Purple, Chief
Operating Reactors Branch #1
Division of Reactor Licensing

Enclosures:

1. Amendment No. 11 to DPR-38
2. Amendment No. 7 to DPR-47
3. Amendment No. 8 to DPR-55
4. Safety Evaluation
5. Federal Register Notice

cc w/enclosures:
See next page

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5-7*

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SURNAME >	<i>Green</i>			RAPurple		
DATE >	7/31/75	7/ 1/75	7/ 1/75	7/ 1/75		

August 15, 1975

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, Hadlock & 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 & incoming:

Mr. Elmer Whitten
State Clearinghouse
Office of the Governor
Division of Administration
1295 Pendleton Street
4th Floor
Columbia, South Carolina 29201

Mr. Dave Hopkins
Environmental Protection Agency
1421 Peachtree Street, NE
Atlanta, Georgia 30309

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. 11
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 March 12, 1975, as supplemented April 16 and June 19, 1975, 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; and
 - 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.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 3.B of Facility License No. DPR-38 is hereby amended to read as follows:

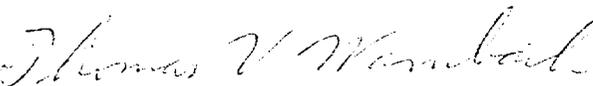


" B: Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 21."

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

FOR THE NUCLEAR REGULATORY COMMISSION

for 
Robert A. Purple, Chief
Operating Reactors Branch #1
Division of Reactor Licensing

Attachment:
Change No. 21 to the
Technical Specifications

Date of Issuance: August 15, 1975

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. 11
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 March 12, 1975, as supplemented April 16 and June 19, 1975, 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; and
 - 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.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 3.B of Facility License No. DPR-47 is hereby amended to read as follows:



" B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 16 ."

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

FOR THE NUCLEAR REGULATORY COMMISSION

for Thomas V. Wambach
Robert A. Purple, Chief
Operating Reactors Branch #1
Division of Reactor Licensing

Attachment:
Change No. 16 to the
Technical Specifications

Date of Issuance: August 15, 1975

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. 8
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 March 12, 1975, as supplemented April 16 and June 19, 1975, 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; and
 - 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.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 3.B of Facility License No. DPR-55 is hereby amended to read as follows:



" B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 8 ."

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

FOR THE NUCLEAR REGULATORY COMMISSION

for 
Robert A. Purple, Chief
Operating Reactors Branch #1
Division of Reactor Licensing

Attachment:
Change No. 8 to the
Technical Specifications

Date of Issuance: August 15, 1975

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 11 TO FACILITY LICENSE NO. DPR-38,
CHANGE NO. 21 TO TECHNICAL SPECIFICATIONS;

AMENDMENT NO. 11 TO FACILITY LICENSE NO. DPR-47,
CHANGE NO. 16 TO TECHNICAL SPECIFICATIONS;

AMENDMENT NO. 8 TO FACILITY LICENSE NO. DPR-55,
CHANGE NO. 8 TO TECHNICAL SPECIFICATIONS;

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

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
i	i
1-2	1-2
4.6-1	4.6-1
4.6-2	4.6-2
4.7-1	4.7-1

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1.2.7 Refueling Operation

An operation involving a change in core geometry by manipulation of fuel or control rods when the reactor vessel head is removed.

21/16/8

1.2.8 Startup

The reactor shall be considered in the startup mode when the shutdown margin is reduced with the intent of going critical.

1.3 OPERABLE

A component or system is operable when it is capable of performing its intended function within the required range. The component or system shall be considered to have this capability when: (1) it satisfies the limiting conditions for operation defined in Specification 3; and (2) it has been tested periodically in accordance with Specification 4 and has met its performance requirements.

1.4 PROTECTIVE INSTRUMENTATION LOGIC

1.4.1 Instrument Channel

An instrument channel is the combination of sensor, wires, amplifiers and output devices which are connected for the purpose of measuring the value of a process variable for the purpose of observation, control and/or protection. An instrument channel may be either analog or digital in nature.

1.4.2 Reactor Protective System

The reactor protective system is shown in Figures 7-1 and 7-6 of the FSAR. It is that combination of protective channels and associated circuitry which forms the automatic system that protects the reactor by control rod trip. It includes the four protective channels, their associated instrument channel inputs, manual trip switch, all rod drive protective trip breakers and activating relays or coils.

1.4.3 Protective Channel

A protective channel as shown in Figure 7-1 of the FSAR (one of three or one of four independent channels, complete with sensors, sensor power supply units, amplifiers and bistable modules provided for every reactor protective safety parameter) is a combination of instrument channels forming a single digital output to the protective system's coincidence logic. It includes a shutdown bypass circuit, a protective channel bypass circuit and reactor trip module and provision for insertion of a dummy bistable.

4.6 EMERGENCY POWER PERIODIC TESTING

Applicability

Applies to the periodic testing and surveillance of the emergency power sources.

Objective

To verify that the emergency power sources and equipment will respond promptly and properly when required.

Specification

- 4.6.1 Monthly, a test of the Keowee Hydro units shall be performed to verify proper operation of these emergency power sources and associated equipment. This test shall assure that:
- a. Each hydro unit can be automatically started from the Unit 1 and 2 control room.
 - b. Each hydro unit can be synchronized through the 230 kV overhead circuit to the startup transformers.
 - c. Each hydro unit can energize the 13.8 kV underground feeder.
- 4.6.2 Annually, the Keowee Hydro units will be started using the emergency start circuits in each control room to verify that each hydro unit and associated equipment is available to carry load within 25 seconds of a simulated requirement for engineered safety features.
- 4.6.3 Annually, a simulated emergency transfer of the 4160 volt main feeder buses to the startup transformer (i.e., CT1, CT2 or CT3) and to the 4160 volt standby buses shall be made to verify proper operation.
- 4.6.4 Quarterly, the External Grid Trouble Protection System logic shall be tested to demonstrate its ability to provide an isolated power path between Keowee and Oconee.
- 4.6.5 Annually, it shall be demonstrated that a Lee Station combustion turbine can be started and connected to the 100 kV line. It shall be demonstrated that the 100 kV line can be separated from the rest of the system and supply power to the 4160 volt main feeder buses.
- 4.6.6 Batteries in the 125 VDC systems shall be tested as follows:
- a. The voltage and temperature of a pilot cell in each bank shall be measured and recorded five times per week for the Instrument and Control, Keowee Hydro, and Switching Station batteries.
 - b. The specific gravity and voltage of each cell shall be measured and recorded monthly for the Instrument and Control, Keowee Hydro, and Switching Station batteries.

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- c. Annually, a one-hour discharge test at the required maximum safeguards load shall be made on the Instrument and Control batteries.
- d. Before initial operation and annually thereafter, a one-hour discharge test shall be made on the Keowee Hydro and Switching Station batteries.

- 4.6.7 The operability of the individual diode monitors in the Instrument and Control and Keowee Station 125 VDC systems shall be verified monthly by imposing a simulated diode failure signal on the monitor.
- 4.6.8 The peak inverse voltage capability of each auctioneering diode in the Instrument and Control, Switchyard and Keowee Hydro 125 VDC systems shall be measured and recorded semiannually.
- 4.6.9 The tests specified in 4.6.6, 4.6.7, and 4.6.8 will be considered satisfactory if control room indication and/or visual examination demonstrate that all components have operated properly.

Bases

The Keowee Hydro units, in addition to serving as the emergency power sources for the Oconee Nuclear Station, are power generating sources for the Duke system requirements. As power generating units, they are operated frequently, normally on a daily basis at loads equal to or greater than required by Table 8.5 of the FSAR for ESF bus loads. Normal as well as emergency startup and operation of these units will be from the Oconee Unit 1 and 2 Control Room. The frequent starting and loading of these units to meet Duke system power requirements assures the continuous availability for emergency power for the Oconee auxiliaries and engineered safety features equipment. It will be verified that these units are available to carry load within 25 seconds, including instrumentation lag, after a simulated requirement for engineered safety features. To further assure the reliability of these units as emergency power sources, they will be, as specified, tested for automatic start on a monthly basis from the Oconee control room. These tests will include verification that each unit can be synchronized to the 230 kV bus and that each unit can energize the 13.8 kV underground feeder.

The interval specified for testing of transfer to emergency power sources is based on maintaining maximum availability of redundant power sources:

Starting a Lee Station gas turbine, separation of the 100 kV line from the remainder of the system, and charging of the 4160 volt main feeder buses are specified to assure the continuity and operability of this equipment.

REFERENCE

FSAR Section 8

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4.7 REACTOR CONTROL ROD SYSTEM TESTS

4.7.1 Control Rod Trip Insertion Time Test

Applicability

Applies to the surveillance of the control rod trip insertion time.

Objective

To assure the control rod trip insertion time is within that used in the safety analyses.

Specification

The control rod insertion time shall be measured at either full flow or no flow conditions as follows:

- a. For all rods following each removal of the reactor vessel head,
- b. For specifically affected individual rods following any maintenance on or modification to the control rod drive system which could affect the drop time of those specific rods, and
- c. For all rods at least once every 18 months.

The maximum control rod trip insertion time for an operable control rod drive mechanism, except for the Axial Power Shaping Rods (APSRs), from the fully withdrawn position to 3/4 insertion (104 inches travel) shall not exceed 1.66 seconds at reactor coolant full flow conditions or 1.40 seconds for no flow conditions. For the APSRs it shall be demonstrated that loss of power will not cause rod movement. If the trip insertion time above is not met, the rod shall be declared inoperable.

Bases

The control rod trip insertion time is the total elapsed time from power interruption at the control rod drive breakers until the control rod has completed 104 inches of travel from the fully withdrawn position. The specified trip time is based upon the safety analysis in FSAR Chapter 14.

A rod is considered inoperable if the trip insertion time is greater than the specified allowable time.

REFERENCES

- (1) FSAR, Section 14
- (2) Technical Specification 3.5.2

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 11 TO FACILITY LICENSE NO. DPR-38
CHANGE NO. 21 TO TECHNICAL SPECIFICATIONS;

SUPPORTING AMENDMENT NO. 11 TO FACILITY LICENSE NO. DPR-47
CHANGE NO. 16 TO TECHNICAL SPECIFICATIONS;

SUPPORTING AMENDMENT NO. 8 TO FACILITY LICENSE NO. DPR-55
CHANGE NO. 8 TO TECHNICAL SPECIFICATIONS;

DUKE POWER COMPANY

OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3

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

Introduction

By letter dated March 12, 1975, Duke Power Company (the licensee) requested a change in the Technical Specifications of Licenses DPR-38, 47 and 55, for the Oconee Nuclear Station, Units 1, 2 and 3. The proposed amendments would delete the definition of Refueling Period and change several equipment surveillance items previously related to the refueling period definition.

Discussion

In the present technical specifications, certain plant surveillance items are assigned frequency of performance coincident with refueling outages. The refueling interval is defined as a period of not more than 18 months. This period was established to ensure that these surveillance items were completed at least once every 18 months. It was expected that refueling would be required within that time period. However, the actual time period between core refuelings, may vary from that originally expected. A number of factors, such as unscheduled maintenance outages or lower power operation, can lengthen refueling intervals. Should the refueling interval extend beyond 18 months, the licensee would be required to request a license amendment.

The licensee has stated that since those surveillance items that are specified to be performed at refueling outages are directly associated with the refueling, the definition of the refueling period can and should be deleted.

Evaluation

In order to approve the deletion of the Refueling Period definition, it is necessary to ensure that those surveillance items with a frequency of performance specified as a refueling interval do in fact require refueling conditions in order to be performed. It is also necessary to assign specific calendar intervals to those surveillance items which do not meet this criterion. Once these determinations are made, it will no longer be necessary to specify a maximum time interval between refueling periods and the definition can be deleted. Accordingly, we requested additional information from the licensee in our letter dated April 3, 1975. The information requested was as follows:

For surveillance items currently on a refueling interval:

- (1) Explain why conditions that exist only during a refueling shutdown are essential to the successful completion of the surveillance period, and
- (2) Propose a specific surveillance interval for any item where the conditions that exist during a refueling shutdown are not essential to the successful completion of the surveillance procedure.

By letter dated April 16, 1975, the licensee identified the following surveillance items as those to be performed during a refueling shutdown:

Technical Specification 4.1.2

Refueling system interlocks functional test; and spent fuel cooling system functional test

Technical Specification 4.6.3

Simulated emergency transfer from 4160 volt main feeder busses to the startup transformers and to the 4160 volt standby busses

Technical Specification 4.7.1

Control rod trip insertion time test

The licensee also proposed that the one-hour discharge test of the 125 volt DC instrument and control batteries be performed annually rather than at refueling intervals.

Based on our review of the licensee's proposals, we agree that the discharge test of the instrument and control batteries does not require refueling conditions and that it should be conducted on an annual basis. We also agree that the functional tests of the refueling system interlocks and the spent fuel cooling system should be conducted during a refueling outage and need not be assigned any specific calendar interval. This is acceptable because this surveillance test will confirm proper operation just prior to the need for these systems.

We do not agree, however, that the simulated emergency transfer from the 4160 volt main feeder busses and the control rod trip insertion time test should be performed on a refueling interval. By letter dated June 19, 1975, the licensee proposed a modified procedure which would allow performing the simulated emergency transfer of the 4160 volt main feeder busses test on an annual basis. This is acceptable and a change to reflect this requirement is included. Regarding rod insertion time tests, we indicated to the licensee that the refueling period definition had originally been written for such surveillance items and was to ensure that the rod insertion time tests are performed at least once every 18 months. Accordingly, the requirements for these tests at least once every 18 months or following reactor vessel head removal is being retained.

It was additionally proposed to the licensee that the frequency requirements of the control rod trip insertion time tests be made consistent with Standard Specifications, which, in addition to the above, require that individual control rods be timed following maintenance or modification which could affect the insertion time of those specific rods. The licensee agrees with this proposal and has requested that this requirement be made a part of the frequency requirements. This is acceptable and a change to reflect this requirement is included.

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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: August 15, 1975

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

Notice is hereby given that the U.S. Nuclear Regulatory Commission (the Commission) has issued Amendments No. 11, 11, and 8 to Facility Operating Licenses No. DPR-38, DPR-47, and DPR-55, respectively, issued to Duke Power Company which revised Technical Specifications for operation of the Oconee Nuclear Station, Units 1, 2 and 3, located in Oconee County, South Carolina. The amendments are effective as of the date of issuance.

These amendments delete the definition of Refueling Period and make changes in several equipment surveillance items which were related to this definition. The simulated emergency transfer of the 4160-volt main feeder busses and the one-hour test discharge of the 125-volt DC instrument and control batteries are now required to be conducted annually. In addition, to be consistent with Standard Specifications, these amendments require that control rod trip insertion times be determined on individual rods following modification or maintenance which could affect the insertion time of those specific rods.

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 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 is not required since the amendments do not involve a significant hazards consideration.

For further details with respect to this action, see (1) the application for amendments dated March 12, 1975, as supplemented April 16, and July 19, 1975, (2) Amendments No. 11, 11, and 8 to Licenses No. DPR-38, DPR-47 and DPR-55, with Changes No. 21, 16, and 8 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, NW., Washington, D.C. and at the Oconee County Library, 201 South Spring Street, 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 Reactor Licensing.

Dated at Bethesda, Maryland, this 15th day of August 1975.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas V. Wambach, Acting Chief
Operating Reactors Branch #1
Division of Reactor Licensing