



LICENSE AUTHORITY FILE CC

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

April 8, 1982

DO NOT REMOVE

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

Posted
Amdt. 110
to DPR-49

Mr. William O. Parker, Jr.
Vice President - Steam Production
Duke Power Company
P. O. Box 33189
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Parker:

The Commission has issued the enclosed Amendments Nos. 110, 110, and 107 to 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 (TSs) in response to your request dated December 7, 1981.

These amendments revise the TSs to include the Emergency Feedwater System (EFWS) automatic initiation circuitry testing requirements, clarify the testing requirement for the Anticipatory Reactor Trip from Loss of Main Feedwater, and require an EFWS flow test. We have also included our evaluation of the EFWS in accordance with NUREG-0737, Item II.E.1.1, in the enclosed Safety Evaluation.

A copy of the Notice of Issuance is also enclosed.

Sincerely,

Philip C. Wagner

Philip C. Wagner, Project Manager
Operating Reactors Branch #4
Division of Licensing

Enclosures:

1. Amendment No. 110 to DPR-38
2. Amendment No. 110 to DPR-47
3. Amendment No. 107 to DPR-55
4. Safety Evaluation
5. Notice

cc w/enclosures: See next page

Duke Power Company

cc w/enclosure(s):

Mr. William L. Porter
Duke Power Company
P. O. Box 33189
422 South Church Street
Charlotte, North Carolina 28242

Oconee County Library
501 West Southbroad Street
Walhalla, South Carolina 29691

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

Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission, Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Regional Radiation Representative
EPA Region IV
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J. Michael McGarry, III, Esq.
DeBevoise & Liberman
1200 17th Street, N.W.
Washington, D. C. 20036

cc w/enclosure(s) & incoming dtd.:

December 7, 1981

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 NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 110
License No. DPR-38

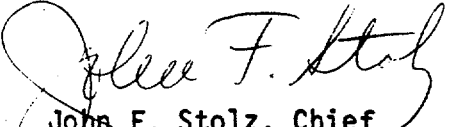
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Power Company (the licensee) dated December 7, 1981, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations 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.110 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


John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 8, 1982



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. 110
License No. DPR-47

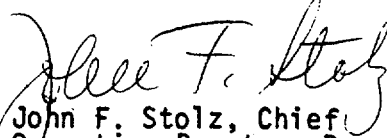
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Power Company (the licensee) dated December 7, 1981, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations 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. 110 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


John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 8, 1982



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. 107
License No. DPR-55

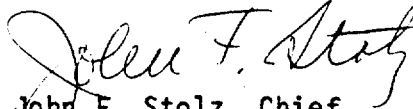
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Power Company (the licensee) dated December 7, 1981, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations 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. 107 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



John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 8, 1982

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 110 TO DPR-38

AMENDMENT NO. 110 TO DPR-47

AMENDMENT NO. 107 TO DPR-55

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

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by amendment numbers and contain vertical lines indicating the area of change.

REMOVE PAGES

4.1-8

4.9-1

INSERT PAGES

4.1-8

4.9-1

Table 4.1-1 (Continued)

<u>Channel Description</u>	<u>Check</u>	<u>Test</u>	<u>Calibrate</u>	<u>Remarks</u>
49. Emergency Feedwater Flow Indicators	MO	NA	RF	
50. PORV and Safety Valve Position Indicators	MO	NA	RF	
51. RPS Anticipatory Reactor Trip System Loss of Turbine Emergency Trip System Pressure Switches	NA	MO	RF	
52. RPS Anticipatory Reactor Trip System Loss of Main Feedwater				
a) Control Oil Pressure Switches	NA	MO	RF	
*b) Discharge Pressure Switches	NA	MO	RF	
53. Emergency Feedwater Initiation Circuits				
a) Control Oil Pressure Switches	NA	MO	RF	
*b) Discharge Pressure Switches	NA	MO	RF	

ES - Each Shift
 DA - Daily
 WE - Weekly
 MO - Monthly

QU - Quarterly
 AN - Annually
 PS - Prior to startup, if not performed previous week
 NA - Not Applicable
 RF - Refueling Outage

* This Technical Specification will become effective as follows:

Unit 1 - at the first convenient outage prior to or at the end of Oconee 1 Cycle 8 Refueling Outage

Unit 2 - end of Oconee 2 Cycle 6 Refueling Outage

Unit 3 - end of Oconee 3 Cycle 7 Refueling Outage

During the interim period, these discharge pressure switches will be tested during cold shutdown not to exceed once per month.

4.9 EMERGENCY FEEDWATER PUMP AND VALVE PERIODIC TESTING

Applicability

Applies to the periodic testing of the turbine-driven and motor-driven emergency feedwater pumps and associated valves.

Objective

To verify that the emergency feedwater pumps and associated valves are operable.

Specification

4.9.1 Pump Test

Monthly, the turbine-driven and motor-driven feedwater pumps shall be operated on recirculation to the upper surge tank for a minimum of one hour.

4.9.2 Valve Test

Quarterly, automatic valves in the emergency feedwater flow path will be determined to be operable in accordance with the applicable edition of the ASME Boiler and Pressure Vessel Code, Section XI.

4.9.3 System Flow Test

Prior to Unit operation above 25% Full Power following any modifications or repairs to the emergency feedwater system which could degrade the flow path and at least once per refueling cycle, the emergency feedwater system shall be given either a manual or an automatic initiation signal.

4.9.4 Acceptance Criteria

These tests shall be considered satisfactory if control board indication and visual observation of the equipment demonstrates that all components have operated properly. In addition, during operation of the System Flow Test (Item 4.9.3 above), flow to the steam generators shall be verified by control room indication.

Bases

The monthly testing frequency is sufficient to verify that the emergency feedwater pumps are operable. Verification of correct operation is made both from the control room instrumentation and direct visual observation of the pumps. The parameters which are observed are detailed in the applicable edition of the ASME Boiler and Pressure Vessel Code, Section XI. The System Flow Test verifies correct total system operation following modifications or repairs.

REFERENCES

- (1) FSAR, Section 10.2.2
- (2) FSAR, Section 14.1.2.8.3



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 110 TO FACILITY OPERATING LICENSE NO. DPR-38

AMENDMENT NO. 110 TO FACILITY OPERATING LICENSE NO. DPR-47

AMENDMENT NO. 107 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

1.0 Introduction

By letter dated June 3, 1981, the NRC approved the design of the Emergency Feedwater System (EFWS) Automatic Initiation and Flow Indication systems for the Oconee Nuclear Station (ONS) with the provision that acceptable Technical Specifications (TSs) be submitted which would require periodic testing of the initiation circuitry. By letter dated December 7, 1981, Duke Power Company (Duke or the licensee) applied for these requested additions to the ONS TSs.

By letter dated October 30, 1981, Duke responded to our August 25, 1981, Safety Evaluation (SE) concerning NUREG-0737, Item II.E.1.1, "Auxiliary Feedwater System Evaluation". We have reviewed this information and have included our findings in this SE.

2.0 EFWS Automatic Initiation

By letter dated May 22, 1981, Duke informed the NRC of the proposed testing to be performed on the EFWS automatic initiation circuitry after its installation. We found the proposed testing to be acceptable provided the tests were performed during each hot shutdown instead of cold shutdown for the Main Feedwater (MFW) discharge pressure switches. In the December 7, 1981 application, Duke provided for monthly testing of both EFWS initiation circuits and the MFW discharge pressure anticipatory reactor trip circuitry. However, in order to perform these tests during reactor operation, modification needed to be made to the discharge pressure test circuitry. These modifications will be implemented as follows:

- Oconee Unit 1: Duke will implement this modification during the first available outage of sufficient length prior to or during the Oconee 1, Cycle 8 refueling outage.
- Oconee Unit 2: This modification will be implemented during the Oconee 2, Cycle 6 refueling outage.
- Oconee Unit 3: This modification will be implemented during the 1982 Oconee 3, Cycle 7 refueling outage.

The proposed TS indicates that the testing requirements will become effective on a schedule consistent with the modification installation described above, and require, in the interim, that the MFW discharge pressure switches be tested during each cold shutdown period if not tested within the previous month. We have reviewed this proposal and find that it is in accordance with our request and presents an acceptable means of providing assurance of continued system operability. Therefore, we conclude that these changes to the TSs are acceptable and that NUREG-0737, Item II.E.1.2, has been satisfactorily resolved.

3.0 EFWS Evaluation

By letter dated August 25, 1981, the NRC provided an SE for the Emergency Feedwater System in accordance with NUREG-0737, Item II.E.1.1. This SE concluded that all but the following issues, involved in the resolution of Item II.E.1.1, had been acceptably addressed. The remaining issues are:

1. Flow tests from the EFW pumps to the steam generators,
2. Endurance testing of EFW pumps,
3. Tornado protection,
4. TSs requiring periodic initiation circuitry testing, and
5. Completion of NRC review of the EFWS flow requirement.

Duke responded to the request contained in our August 25, 1981, letter asking for additional information related to Items 1, 2 and 3 above by letter dated October 30, 1981; the approval of Duke's December 7, 1981 application, discussed in the preceding section of this SE, resolves Item 4 above; and our evaluation of Item 5 follows.

Duke provided information related to the EFWS flowrate design bases and criteria, requested by Item II.E.1.1, by letters dated March 3, April 3 and April 17, 1981. Duke's response evaluated various transient and accident conditions involving the use of the EFWS. The results of these evaluations showed that any one EFW pump (two electric motor driven and one steam turbine driven pumps are provided in each unit) could provide sufficient EFW flow to remove decay heat from the Reactor Coolant System. We have reviewed this information and have concluded that the flowrate design bases are acceptable at the ONS.

Duke's October 30, 1981, letter responded to the remaining open issues for Item II.E.1.1. Duke objected to the TS requiring a flow test to the steam generators (SGs) following a cold shutdown because: 1) the injection of cold water into the SGs may cause unnecessary stressing, and 2) similar testing is not required for other systems presently required to be operable by the TSs. We have reviewed this response and agree that this testing is not needed following each cold shutdown at the ONS since the ASME Section XI pump and valve testing in addition to the double verification of correct valve positioning following a cold shutdown provide reasonable assurance of system operability. However, we maintain that it is advisable periodically, and following any maintenance or repairs which could degrade the

flow path, to perform a system flow test. This position was discussed with Duke representatives and they agreed that such testing would be accomplished. Therefore, with the agreement of Duke, an additional requirement (Specification 4.9.3) was incorporated into the ONS TSs which requires a system flow test. We find this change to be acceptable and that this issue has been acceptably resolved.

Duke also objected to the necessity of performing a 48-hour endurance test on each EFW pump. Duke provided the test data from endurance tests performed on one motor driven and one turbine driven EFW pump. This data indicates that the tests were accomplished without significant problems. We have reviewed this information and find that this issue has been adequately resolved because: 1) the EFW pumps which were acceptably tested are identical to the other comparable EFW pumps, and 2) all EFW pumps will continue to be tested in accordance with procedures which are at least as restrictive as ASME Section XI requirements.

The last item involved providing assurance, in the event of a tornado with complete loss of both the MFWS and the normal EFWS, that cooling water could still be provided to the SGs. Duke stated that the Auxiliary Service Water System (ASWS) could be used to provide the cooling water under these circumstances. In addition, although an analysis has not as yet been performed, Duke states that the Standby Shutdown Facility (SSF), which is presently being installed, will also be available to provide the necessary cooling water flow.

We have reviewed the information provided by Duke and question the adequacy of the ASWS in removing decay heat since this system is a low pressure system which would require considerable steam generator blowdown to lower the pressure to the point where the ASWS could provide cooling water flow. Additional concerns involve overpressurization of the ASWS and possible cold shocking effects of injecting cold water into a relatively dry SG. Since verification that the SSF system is tornado protected has not been accomplished, we, likewise, question its acceptability for this service.

We have discussed these concerns with Duke and an agreement has been reached that this subject will be handled as a separate issue. Duke has agreed to provide supporting information within 120 days of this evaluation on the availability of a source of SG cooling water and/or an evaluation which demonstrates that the probability of a tornado damaging both the normal EFWS and the SSF system is acceptably low. We find this to be an acceptable approach to this concern.

On the basis of the above, we find that all concerns of NUREG-0737, Item II.E.1.1, have been acceptably resolved. Therefore, we conclude that this Item is satisfactory for continued plant operation.

4.0 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.

5.0 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: April 8, 1982

The following NRC staff personnel have contributed to this Safety Evaluation:
P. C. Wagner, T. Chan.

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. 110, 110 and 107 to Facility Operating Licenses Nos. DPR-38, DPR-47 and DPR-55, respectively, issued to Duke Power Company, which revised the Technical Specifications (TSs) 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 TSs to include the Emergency Feedwater System (EFWS) automatic initiation circuitry testing requirements, clarify the testing requirements for the Anticipatory Reactor Trip from Loss of Main Feedwater, and require an EFWS flow test.

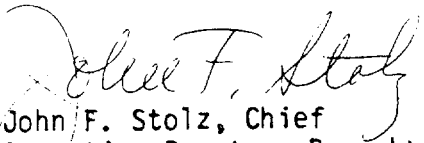
The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments 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 Section 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 7, 1981, (2) Amendments Nos. 110, 110, and 107 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, 501 West Southbroad 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 Licensing.

Dated at Bethesda, Maryland, this 8th day of April 1982.

FOR THE NUCLEAR REGULATORY COMMISSION


John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing