

November 2, 2004

Mr. Ronald A. Jones
Vice President, Oconee Site
Duke Energy Corporation
7800 Rochester Highway
Seneca, SC 29672

SUBJECT: OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3 RE: ISSUANCE OF
AMENDMENTS (TAC NOS. MC1785, MC1786, AND MC1787)

Dear Mr. Jones:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 341, 343, and 342 to Renewed Facility Operating Licenses DPR-38, DPR-47, and DPR-55, respectively, for the Oconee Nuclear Station, Units 1, 2, and 3. The amendments consist of changes to the Technical Specifications in response to your application dated January 15, 2004, as supplemented by letter dated March 15, 2004.

The amendments revise the Technical Specifications associated with the control rod drive trip devices. These amendments are needed to support implementation of the reactor trip breaker replacement.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Leonard N. Olshan, Sr. Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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

Enclosures:

1. Amendment No. 341 to DPR-38
2. Amendment No. 343 to DPR-47
3. Amendment No. 342 to DPR-55
4. Safety Evaluation

cc w/encls: See next page

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DISTRIBUTION: See next page

ADAMS Accession Number: ML042820468 (Package)

ADAMS Accession Number: ML042820458 (Amendment)

ADAMS Accession Number: ML043080290 (Technical Specifications)

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DATE	10/12/04	10/12/04	09/21/04	10/21/04	10/29/04	10/26/04

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SUBJECT: OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3 RE: ISSUANCE OF
AMENDMENTS RE: (TAC NOS. MC1785, MC1786, AND MC1787)

Date: November 2, 2004

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DUKE ENERGY CORPORATION

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 341
Renewed License No. DPR-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Oconee Nuclear Station, Unit 1 (the facility) Renewed Facility Operating License No. DPR-38 filed by the Duke Energy Corporation (the licensee) dated January 15, 2004, as supplemented by letter dated March 15, 2004, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;
 - 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 hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Renewed Facility Operating License No. DPR-38 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 341, 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 its date of issuance and shall be implemented within 90 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Mary Jane Ross-Lee, Acting Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: November 2, 2004

DUKE ENERGY CORPORATION

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 343
Renewed License No. DPR-47

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Oconee Nuclear Station, Unit 2 (the facility) Renewed Facility Operating License No. DPR-47 filed by the Duke Energy Corporation (the licensee) dated January 15, 2004, as supplemented by letter dated March 15, 2004, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;
 - 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 hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Renewed Facility Operating License No. DPR-47 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 343, 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 its date of issuance and shall be implemented within 90 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Mary Jane Ross-Lee, Acting Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: November 2, 2004

DUKE ENERGY CORPORATION

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT 3

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 342
Renewed License No. DPR-55

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Oconee Nuclear Station, Unit 3 (the facility) Renewed Facility Operating License No. DPR-55 filed by the Duke Energy Corporation (the licensee) dated January 15, 2004, as supplemented by letter dated March 15, 2004, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;
 - 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 hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Renewed Facility Operating License No. DPR-55 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 342, 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 its date of issuance and shall be implemented within 90 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Mary Jane Ross-Lee, Acting Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: November 2, 2004

ATTACHMENT TO LICENSE AMENDMENT NO. 341
RENEWED FACILITY OPERATING LICENSE NO. DPR-38
DOCKET NO. 50-269
AND
TO LICENSE AMENDMENT NO. 343
RENEWED FACILITY OPERATING LICENSE NO. DPR-47
DOCKET NO. 50-270
AND
TO LICENSE AMENDMENT NO. 342
RENEWED FACILITY OPERATING LICENSE NO. DPR-55
DOCKET NO. 50-287

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

<u>Remove</u>	<u>Insert</u>
3.3.4-1	3.3.4-1
3.3.4-2	3.3.4-2
3.3.4-3	3.3.4-3
B 3.3.4-1	B 3.3.4-1
B 3.3.4-2	B 3.3.4-2
B 3.3.4-3	B 3.3.4-3
B 3.3.4-4	B 3.3.4-4
B 3.3.4-5	B 3.3.4-5
B 3.3.4-6	B 3.3.4-6
—	B 3.3.4-7

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO
AMENDMENT NO. 341 TO RENEWED FACILITY OPERATING LICENSE DPR-38
AMENDMENT NO. 343 TO RENEWED FACILITY OPERATING LICENSE DPR-47
AND AMENDMENT NO. 342 TO RENEWED FACILITY OPERATING LICENSE DPR-55
DUKE ENERGY CORPORATION
OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3
DOCKET NOS. 50-269, 50-270, AND 50-287

1.0 INTRODUCTION

By letter to the U.S. Nuclear Regulatory Commission (NRC, Commission) dated January 15, 2004, as supplemented March 15, 2004, Duke Energy Corporation (the licensee) submitted a request for changes to the Oconee Nuclear Station (Oconee), Units 1, 2, and 3, Technical Specifications (TSs). The requested changes would revise the TSs associated with the control rod drive (CRD) trip devices. The requested changes are needed to support implementation of the reactor trip breaker (RTB) replacement.

The proposed changes would revise the TSs concerning the RTB to reflect a modified RTB configuration associated with the replacement of the CRD system. Specifically, the licensee's January 15, 2004, submittal indicated that the replacement of the CRD/RTBs is part of the overall digital CRD control system (CRDCS) upgrade. The replacement of the RTBs, although included in the overall modification, is not a digital upgrade. The digital upgrade involves the CRDCS only. The portion of the modification requiring a TS change to allow implementation is the RTB replacement. The licensee is replacing the existing two AC RTBs and four DC RTBs with four AC RTBs. The licensee proposes to revise TS 3.3.4, "Control Rod Drive (CRD) Trip Devices," to address the new configuration. Since the Oconee TSs are common to all three units, Notes will be used to indicate the applicable requirement for each unit based on whether the modifications have been implemented. The proposed change to TS 3.3.4 adds a limiting condition for operation (LCO) and appropriate ACTIONS for the new configuration. After completion of the modification on all three units, the licensee plans to submit a TS change to remove the obsolete requirements related to the existing CRD trip devices.

The proposed TS changes would:

- modify existing LCO 3.3.4 to apply only when the CRD/RTB upgrade has not yet been completed

- add a requirement to LCO 3.3.4 that four AC CRD trip breakers must be operable if the CRD/RTB upgrade has been completed
- modify LCO 3.3.4 Conditions A and B to accommodate both the upgraded and the non-upgraded configuration
- modify LCO 3.3.4 Condition C to accommodate the fact that electronic trip assembly relays may no longer be required (they are used only in the present plant condition, and are eliminated in the upgrade)

This safety evaluation addresses the acceptability of the proposed TS changes for this modification.

2.0 REGULATORY EVALUATION

Title 10 of the Code of Federal Regulations (10 CFR) Section 50.55a(h)(2) requires that, for plants with construction permits issued prior to January 1, 1971, the design of protection systems must meet the original licensing bases or may meet the Institute of Electrical and Electronics Engineers (IEEE) Standard 603-1991, "Criteria for Safety Systems for Nuclear Power Generating Stations," with correction sheet dated January 30, 1995. The construction permits for the three Oconee units were issued in 1967. In its March 15, 2004, submittal, the licensee identified the applicable regulatory criteria as:

- IEEE-279, "Criteria for Protection Systems for Nuclear Power Plants"
- IEEE-379, "Standard Application of the Single Failure Criterion to Nuclear Power Generating Class 1E Systems"
- Regulatory Guide 1.53, "Application of the Single Failure Criterion to Nuclear Power Plant Protection Systems"
- Regulatory Guide 1.75, "Physical Independence of Electric Systems"

3.0 TECHNICAL EVALUATION

The NRC staff has reviewed the licensee's regulatory and technical analyses in support of its proposed license amendment, which are described in Attachment 3 to the licensee's submittal. The detailed evaluation described in this section supports the conclusion that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

The proposed change is requested in connection with the replacement of the CRDCS. The CRDCS itself is not safety-related, and NRC concurrence is not required for modifications to it. But the CRDCS does interface with the reactor protection system (RPS) by way of the RTBs. Since the RTBs are safety-related components of the RPS, changes to them do require NRC concurrence. In the present case, the RTBs are not altered functionally, but they are replaced

with upgraded hardware and the configuration of the RTBs is simplified to accommodate the new CRDCS.

The licensee indicates that, in the new configuration:

- The existing channelization, separation, and independence of the RTBs are retained.
- The diverse trip system (DTS) retains its ability to interrupt power to the CRD mechanisms independently of the RTBs.
- The new RTBs are seismically qualified, and they are located in areas not subject to harsh environments.
- The new RTBs are an updated version of a type of hardware used widely and successfully in this application. They replace the original RTBs, which have become obsolete and increasingly difficult to maintain.
- The new design is simpler and therefore more reliable than the existing design, and utilizes a smaller number of components.
- The new design is similar to the design currently in use at Davis Besse Nuclear Power Station (Davis Besse). The Davis Besse design has been shown to be more reliable than the Oconee design.

The information provided by the licensee confirms that failure of any one RTB will not inhibit the trip function. The DTS is not altered in the proposed TS changes. The interface of the DTS with the CRDCS is altered as a result of the change in the CRDCS modifications, but the interface functions remain unchanged.

It is, therefore, reasonable to expect that the modified configuration will retain the level of reliability credited in the original design.

The present TSs address the present plant configuration. The planned modification will alter the configuration in such a manner as to render the present TSs no longer applicable. The proposed TS changes address the planned changes in system configuration. The proposed TS changes do not alter the intent of the TS requirements, and are, therefore, acceptable.

Based upon the above evaluation, there is reasonable assurance that the licensee will continue to meet the criteria described in the foregoing regulatory evaluation.

On the basis of the above regulatory and technical evaluations of the licensee's justifications for TS changes, the NRC staff concludes that the licensee's proposed TS changes are acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the South Carolina State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (69 FR 19566). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: P. Rebstock

Date: November 2, 2004

Oconee Nuclear Station, Units 1, 2, and 3

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