



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. 156
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 August 15, 1984, 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:

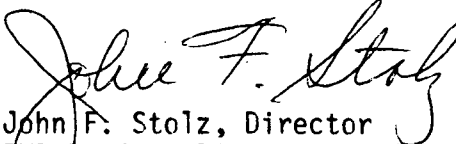
Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 156 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION


John F. Stolz, Director
PWR Project Directorate #6
Division of PWR Licensing-B

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 30, 1987



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. 156
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 August 15, 1984, 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:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 156 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, Director
PWR Project Directorate #6
Division of PWR Licensing-B

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 30, 1987



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. 153
License No. DPR-55

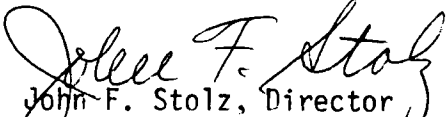
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Power Company (the licensee) dated August 15, 1984, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations 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:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 153 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, Director
PWR Project Directorate #6
Division of PWR Licensing-B

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 30, 1987

ATTACHMENTS TO LICENSE AMENDMENTS

AMENDMENT NO. 156 TO DPR-38

AMENDMENT NO. 156 TO DPR-47

AMENDMENT NO. 153 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.

<u>Remove Pages</u>	<u>Insert Pages</u>
3.1-3a	3.1-3a
3.1-5	3.1-5
4.2-2	4.2-2*

*overleaf page provided to maintain document completeness

- 3.1.2.7 Prior to exceeding fifteen (Unit 1)
fifteen (Unit 2)
fifteen (Unit 3)

effective full power years of operation.

Figures 3.1.2-1A (Unit 1), 3.1.2-2A (Unit 1)
3.1.2-1B (Unit 2), 3.1.2-2B (Unit 2)
3.1.2-1C (Unit 3), 3.1.2-2C (Unit 3)

and 3.1.2-3A (Unit 1)
3.1.2-3B (Unit 2)
3.1.2-3C (Unit 3)

and Technical Specification 3.1.2.1, 3.1.2.2 and 3.1.2.3 shall be updated for the next service period in accordance with 10 CFR 50, Appendix G, Section V.B. and V.E.

- 3.1.2.8 The updated proposed technical specification referred to in 3.1.2.7 shall be submitted for NRC review at least 90 days prior to the end of the service period for Units 1, 2 and 3.

- 3.1.2.9 When the temperature of one or more of the RCS cold legs is less than or equal to 325°F, except when the reactor vessel head is removed, then at least one of the following low temperature overpressure protection systems shall be operable:

- a. Both Train A and Train B of HP injection shall be inoperable by:
 1. For Train A by shutting and deactivating valves HP-26, -409, and -410 by tagging open the valve breakers and tagging the valves in the closed position, or by deactivating pumps HP-A and HP-B and tagging the pump breakers open.
 2. For Train B by shutting and deactivating valves HP-27 and -409 by tagging open the valve breakers and tagging the valves in the closed position, or by deactivating pump HP-C and tagging the pump breaker open.
- b. The power operated relief valve (PORV) with a lift setting, of less than or equal to 500 psig, a steam bubble or nitrogen blanket in the pressurizer with a pressurizer level less than or equal to 260 inches, and an RCS pressure less than 400 psig.

If neither overpressure protection system is operable then within 1 hour restore at least one system to operable status, or depressurize and establish an RCS vent equivalent to 1 inch ID within the next 12 hours.

- c. In the event either the PORV or the RCS vent equivalent to 1 inch ID is used to mitigate an RCS pressure transient, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.6.3 within 30 days. The report shall describe the circumstances initiating the transient, the effect of the PORVs or vent(s) on the transient and any corrective action necessary to prevent recurrence.

limitations of 110°F and 237 psig are based on the highest estimated RT_{NDT} of +40°F and the preoperational system hydrostatic test pressure of 1312 psig. The average metal temperature is assumed to be equal to or greater than the coolant temperature. The limitations include margins of 25 psi and 10°F for possible instrument error.

The requirements to perform leakage tests of systems outside of containment which could potentially contain radioactivity were established by the NRC following TMI. Oconee performs the leak test of LPI by establishing RCS pressure at about 300 psig and with LPI at this same pressure, checking for leakage. Such a test is within the scope of testing upon which the curves referenced in Specification 3.1.2.2 are based--that is, they are not routine evolutions, such as heatup and cooldown, but rather infrequent leak tests conducted on a refueling outage basis. As such, the hydrostatic/leak test pressure-temperature limitations are applicable for the RCS when performing leak tests of the LPI system.

The spray temperature difference is imposed to maintain the thermal stresses at the pressurized spray line nozzle below the design limit.

The low temperature overprotection systems for Oconee consist of either deactivating both trains of high pressure injection or by having the PORV operable with the condition of the RCS as specified. If either of these is inoperable, the RCS must be depressurized and a vent path equivalent to the PORV flow capability established.

REFERENCES

- (1) Analysis of Capsule OCII-A from Duke Power Company Oconee Unit 2 Reactor Vessel Materials Surveillance Program, BAW-1699, December 1981.
- (2) Analysis of Capsule OCIII-B from Duke Power Company Oconee Unit 3 Reactor Vessel Materials Surveillance Program, BAW-1697, October 1981.
- (3) Analysis of Capsule OCI-E from Duke Power Company Oconee Unit 1 Reactor Vessel Materials Surveillance Program, BAW-1436, September 1977.

4.2 STRUCTURAL INTEGRITY OF ASME CODE CLASS 1, 2 AND 3 COMPONENTS

Applicability

Applies to the surveillance of the ASME Code Class 1, 2 and 3 components.

Objective

To assure the continued structural integrity of the ASME Code Class 1, 2 and 3 components.

Specification

- 4.2.1 Inservice examination of ASME Code Class 1, 2 and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10 CFR 50, Section 50.55a(g)(4), to the extent practicable within the limitations of design, geometry and materials of construction of the components, except where specific written relief has been granted by the Commission.
- 4.2.2 To assure the structural integrity of the reactor internals throughout the life of the unit, the two sets of main internals bolts (connecting the core barrel to the core support shield and to the lower grid cylinder) shall remain in place and under tension. This will be verified by visual inspection to determine that the welded bolt locking caps remain in place. All locking caps will be inspected after hot functional testing and whenever the internals are removed from the vessel during a refueling or maintenance shutdown. The core barrel to core support shield caps will be inspected each refueling shutdown.
- 4.2.3 At approximately three-year intervals, the bore and keyway of each reactor coolant pump flywheel shall be subjected to an in-place, volumetric examination. Whenever maintenance or repair activities necessitate flywheel removal, a surface examination of exposed surfaces and a complete volumetric examination shall be performed if the interval measured from the previous such inspection is greater than 6 2/3 years.

4.2.4 The reactor vessel material irradiation surveillance specimens removed from Units 1, 2 and 3 reactor vessels in 1976 shall be installed, irradiated in and withdrawn from the Crystal River Unit 3 reactor vessel in accordance with the schedule shown in Table 4.2-1. Following withdrawal of each capsule listed in Table 4.2-1, Duke Power Company shall be responsible for testing the specimens in those capsules and submitting a report of test results in accordance with 10 CFR 50, Appendix H.

4.2.5 The licensee shall submit a report or application for license amendment to the NRC within 90 days after the occurrence of the following: After March 13, 1978, any time that Crystal River Unit No. 3 fails to maintain a cumulative reactor utilization factor of greater than 45%.

The report shall provide justification for continued operation of Oconee Nuclear Station Units 1, 2 and 3 with the reactor vessel surveillance program conducted at Crystal River Unit No. 3 or the application for license amendment shall propose an alternate program for conduct of the reactor vessel surveillance program.

4.2.6 The power operated relief valve (PORV) is used for low temperature overpressure protection of the RCS and shall be demonstrated operable by:

- a. Performing an operability test prior to each startup from cold shutdown.
- b. Performing a calibration of the actuation circuit each refueling outage.
- c. Performing an inspection of the PORV at least once every two refueling cycles.

4.2.7 Each shift, the RCS vent(s) (as defined in Specification 3.1.2.9) shall be verified to be open, if the vent(s) is(are) being used for overpressure protection. If the vent pathway is provided with a valve which is locked, sealed, or otherwise secured in the open position, then these valves will open at least once per 31 days.

Bases

The surveillance program has been developed to comply with the applicable edition of Section XI and addenda of the ASME Boiler and Pressure Vessel Code, Inservice Inspection of Nuclear Reactor Coolant Systems, as required by 10 CFR 50.55(a) to the extent practicable within limitations of design, geometry and materials of construction. 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 number of reactor vessel specimens and the frequencies for removing and testing these specimens are provided to assure compliance with the requirements of Appendix H to 10 CFR Part 50.

For the purpose of Technical Specification 4.2.5. Cumulative reactor utilization factor is defined as: $\{(\text{Cumulative thermal megawatt hours since attainment of commercial operation at 100\% power}) \times 100\} + \{(\text{licensed thermal power}) \times (\text{cumulative hours since attainment of commercial operation at 100\% power})\}$. The definition of Regulatory Guide 1.16, Revision 4 (August 1975) applies for the term "commercial operation".