



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

DUKE ENERGY CORPORATION

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 228  
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) Facility Operating License No. DPR-47 filed by the Duke Energy Corporation (the licensee) dated January 15, 1998, 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.

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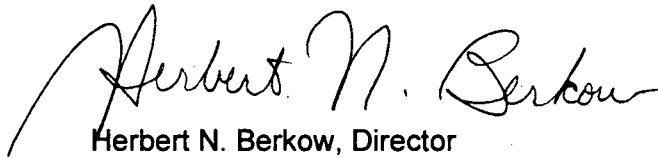
2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Facility Operating License No. DPR-47 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.228, 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 upon receipt.

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Technical Specification  
Changes

Date of Issuance: February 23, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 228

FACILITY OPERATING LICENSE NO. DPR-47

DOCKET NO. 50-270

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change.

Remove Pages

4.1-7

4.1-8a

4.5-4

4.5-5

Insert Pages

4.1-7

4.1-8a

4.5-4

4.5-5\*

\*overflow page - no change

Table 4.1-1 (CONTINUED)

<u>Channel Description</u>	<u>Check</u>	<u>Test</u>	<u>Calibrate</u>	<u>Remarks</u>
41. Engineered Safeguards Channel 1 HP Injection & Reactor Building Isolation Manual Trip	NA	RF	NA	Includes Reactor Building isolation of non-essential systems only.
42. Engineered Safeguards Channel 2 HP Injection & Reactor Building Isolation Manual Trip	NA	RF	NA	Includes Reactor Building isolation of non-essential systems only.
43. Engineered Safeguards Channel 3 LP Injection Manual Trip	NA	RF	NA	
44. Engineered Safeguards Channel 4 LP Injection Manual Trip	NA	RF	NA	
45. Engineered Safeguards Channel 5 RB Isolation & Cooling Manual Trip	NA	RF(1)	NA	Includes Reactor Building isolation of essential systems only. (1) A one-time extension of the test frequency to a maximum of 23 months is allowed for Oconee Unit 2 during operating cycle 16.
46. Engineered Safeguards Channel 6 RB Isolation & Cooling Manual Trip	NA	RF(1)	NA	Includes Reactor Building isolation of essential systems only. (1) A one-time extension of the test frequency to a maximum of 23 months is allowed for Oconee Unit 2 during operating cycle 16.
47. Engineered Safeguards Channel 7 Spray Manual Trip	NA	RF	NA	
48. Engineered Safeguards Channel 8 Spray Manual Trip	NA	RF	NA	

Table 4.1-1 (CONTINUED)

<u>Channel Description</u>	<u>Check</u>	<u>Test</u>	<u>Calibrate</u>	<u>Remarks</u>
55. Containment Pressure Monitor (PT-230, 231)	MO	NA	AN	TMI Item II.F.1.4
56. Containment Water Level Monitor-Wide Range (LT-90, -91)	MO	NA	RF	TMI Item II.F.1.5
57. Containment Hydrogen Monitor (MT-80,-81)	NA	MO	AN	TMI Item II.F.1.6
58. Wide Range Hot Leg Level	NA	RF(1)	RF(1)	(1) A one-time extension of the channel test and calibration frequency to a maximum of 24 months is allowed for Oconee Unit 2 during operating cycle 16.
59. Reactor Vessel Head Level	NA	RF(1)	RF(1)	(1) A one-time extension of the channel test and calibration frequency to a maximum of 24 months is allowed for Oconee Unit 2 during operating cycle 16.
60. Core Exit Thermocouples	MO	NA	RF(1)	(1) A one-time extension of the calibration frequency to a maximum of 24 months is allowed for Oconee Unit 2 during operating cycle 16.
61. Subcooling Monitors	MO	RF(1)	RF(1)	(1) A one-time extension of the channel test and calibration frequency to a maximum of 24 months is allowed for Oconee Unit 2 during operating cycle 16.

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  
 STB - STAGGERED TEST BASIS

## 4.5.2 Reactor Building Cooling Systems

### Applicability

Applies to testing of the Reactor Building Cooling Systems.

### Objective

To verify that the Reactor Building Cooling Systems are operable.

### Specification

#### 4.5.2.1 System Tests

##### 4.5.2.1.1 Reactor Building Spray System

- a.
  - (1) During each refueling outage, a system test shall be conducted to demonstrate proper operation of the system. A test signal will be applied to demonstrate actuation of the Reactor Building Spray System.
  - (2) The test will be considered satisfactory if visual observation and control board indication verifies that all components have responded to the actuation signal properly; the appropriate pump breakers shall have closed, and all valves shall have completed their travel.
- b. Station compressed air will be introduced into the spray headers to verify the availability of the headers and spray nozzles at least every ten years.

##### 4.5.2.1.2 Reactor Building Cooling System

- a. During each refueling outage<sup>1</sup>, a system test shall be conducted to demonstrate proper operation of the system. The test shall be performed in accordance with the procedure summarized below:
  - (1) A test signal will be applied to actuate the Reactor Building Cooling System for reactor building cooling operation.
  - (2) Verification of the engineered safety features function of the Low Pressure Service Water System which supplies coolant to the reactor building coolers shall be made to demonstrate operability of the coolers.
- b. The test will be considered satisfactory if control board indication verifies that all components have responded to the actuation signal properly, the appropriate valves have completed their travel, and fans are running at half speed.

Oconee 1, 2, and 3

4.5-4

Amendment No. 203(Unit 1)  
Amendment No. 228(Unit 2)  
Amendment No. 200(Unit 3)

<sup>1</sup>A one-time extension of the Reactor Building Cooling system test frequency to a maximum of 23 months is allowed for Oconee Unit 2 during operating cycle 16.

## Bases

The Reactor Building Coolant System and Reactor Building Spray System are designed to remove heat in the containment atmosphere to control the rate of depressurization in the containment. The peak transient pressure in the containment is not affected by the two heat removal systems.

The delivery capability of one reactor building spray pump at a time can be tested by opening the valve in the line from the borated water storage tank, opening the corresponding valve in the test line, and starting the corresponding pump. Pump discharge pressure and flow indication demonstrate performance.

With the pumps shut down and the borated water storage tank outlet closed, the reactor building spray injection valves can each be opened and closed by operator action. With the reactor building spray inlet valves closed, low pressure air or fog can be blown through the test connections of the reactor building spray nozzles to demonstrate that the flow paths are open.

The RB Spray system test required by Specification 4.5.2.1.1 verifies that the RB Spray pumps and valves respond as required to actuation of ES channels 7 and 8. In addition, this test verifies that LP-21, and LP-22 (BWST supply to the RB Spray pumps) respond as required to actuation of ES channels 7 and 8. The test required by Specification 4.5.3 verifies the containment heat removal capability of the RB Spray system (in conjunction with the LPI coolers and RBCUs).

The equipment, piping, valves, and instrumentation of the Reactor Building Cooling System are arranged so that they can be visually inspected. The cooling units and associated piping are located outside the secondary concrete shield. Personnel can enter the Reactor Building during power operations to inspect and maintain this equipment. The service water piping and valves out-side the Reactor Building are inspectable at all times. The reactor building fans are normally operated periodically, constituting the test that these fans are operable.

The RBCU system test required by Specification 4.5.2.1.2 verifies that the RBCU fans respond as required to actuation of ES channels 5 and 6. In addition, this test verifies that LPSW-18 (LPSW for "A" RBCU), LPSW-21, LPSW-565, and LPSW-566 (LPSW for "B" RBCU), and LPSW-24 (LPSW for "C" RBCU) respond as required to actuation of ES channels 5 and 6. The LPI system test required by Specification 4.5.1.1.2 verifies that the LPSW pumps respond as required to actuation of ES channels 3 and 4. The test required by Specification 4.5.3 verifies the containment heat removal capability of the RBCUs (in conjunction with the LPI coolers and RB Spray system).

## REFERENCE

- (1) FSAR, Section 6

Oconee 1, 2, and 3

4.5-5

Amendment No. 203(Unit 1)  
Amendment No. 228(Unit 2)  
Amendment No. 200(Unit 3)