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## UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

#### DUKE POWER COMPANY

#### DOCKET NO. 50-269

### OCONEE NUCLEAR STATION, UNIT 1

## AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 216 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) Facility Operating License No. DPR-38 filed by the Duke Power Company (the licensee) dated December 7, 1995, 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 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. 216, 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 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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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: April 15, 1996

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## UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

#### DUKE POWER COMPANY

## DOCKET NO. 50-270

#### OCONEE NUCLEAR STATION, UNIT 2

## AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 216 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 Power Company (the licensee) dated December 7, 1995, 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 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. 216, 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 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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

Attachment: Technical Specification Changes

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#### DUKE POWER COMPANY

#### DOCKET NO. 50-287

#### OCONEE NUCLEAR STATION, UNIT 3

## AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 213 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) Facility Operating License No. DPR-55 filed by the Duke Power Company (the licensee) dated December 7, 1995, 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 Facility Operating License No. DPR-55 is hereby amended to read as follows:

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 213, 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 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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

Attachment: Technical Specification Changes

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## ATTACHMENT TO LICENSE AMENDMENT NO. 216

#### FACILITY OPERATING LICENSE NO. DPR-38

#### DOCKET NO. 50-269

## <u>AND</u>

## TO LICENSE AMENDMENT NO. 216

#### FACILITY OPERATING LICENSE NO. DPR-47

### DOCKET NO. 50-270

## AND

## TO LICENSE AMENDMENT NO. 213

#### FACILITY OPERATING LICENSE NO. DPR-55

#### DOCKET NO. 50-287

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 3.4-1 3.4-2 3.4-3

4.1-8

3.4-1 3.4-2\* 3.4-3

3.4-3

Insert Pages

\*No change - overflow page

#### 3.4 SECONDARY SYSTEM DECAY HEAT REMOVAL

#### Applicability

Applies to the secondary system requirements for removal of reactor decay heat.

#### **Objective**

To specify minimum conditions necessary to assure the capability to remove decay heat from the reactor core.

#### **Specification**

- 3.4.1 The reactor shall not be heated above 250°F unless the following conditions are met:
  - a. Three emergency feedwater pumps (one steam driven pump capable of being driven from an operable steam supply system and two motor driven pumps) and associated manual initiation circuitry shall be operable.
  - b. Two 100% emergency feedwater flow paths shall be operable. Each flow path shall have at least one flow indicator operable.
- 3.4.2 In addition to the requirements of 3.4.1, prior to criticality, the automatic initiation circuitry associated with loss of main feedwater pumps as sensed by low hydraulic oil pressure shall be operable.
- 3.4.3 During operation greater than 250°F, the provisions of 3.4.1 and 3.4.2 may be modified to permit the following conditions:
  - a. One motor driven emergency feedwater pump may be inoperable for a period of up to seven days. If the inoperable pump is not restored to operable status within 7 days, the unit shall be brought to hot shutdown within an additional 12 hours and below 250°F in another 12 hours.
  - b. One turbine driven emergency feedwater pump or one emergency feedwater flow path may be inoperable for a period of up to 72 hours. If the inoperable pump or flow path is not restored to operable status within 72 hours the unit will be at hot shutdown within an additional 12 hours and below 250°F in another 12 hours.
  - c. Two motor driven emergency feedwater pumps may be inoperable for a period of up to 12 hours. If at least one pump is not restored to operable status within 12 hours, the unit shall be brought to hot shutdown within an additional 12 hours and below 250°F in another 12 hours.

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- d. With three emergency feedwater pumps and/or both emergency feedwater flow paths inoperable, immediately initiate corrective action to restore at least one emergency feedwater pump and associated emergency feedwater flowpath to operable status. The unit shall be at hot shutdown within 12 hours and below 250°F in another 12 hours if one emergency feedwater pump and associated flowpath are not restored to operable status.
- e. If an emergency feedwater pump is inoperable due only to automatic initiation circuitry as specified by 3.4.2, the additional provisions of 3.4.3 a, b, c, and d which require cooldown of the RCS do not apply.
- 3.4.4 The 16 main steam safety relief valves shall be operable.
- 3.4.5 A minimum of 72,000 gallons of water per operating unit shall be available in the upper surge tank, condensate storage tank, and hotwell. A minimum of 6 ft. (=30,000 gal.) shall be available in the upper surge tank.
- 3.4.6 The controls of the emergency feedwater system shall be independent of the Integrated Control System.

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#### Bases

The Main Feedwater System and the Turbine Bypass System are normally used for decay heat removal and cooldown above 250°F. Feedwater makeup is supplied by operation of a hotwell pump, condensate booster pump, and a main feedwater pump.

Operability of the Emergency Feedwater System (EFW) assures the capability to remove decay heat and cool down the Reactor Coolant System to the operating conditions for switch over to decay heat removal by the Decay Heat Removal System, in the event that the Main Feedwater System is inoperable. The EFW system consists of a turbine driven pump (880 gpm), two motor driven pumps (450 gpm each), and associated flow paths to the steam generators.

The limiting transient requiring maximum EFW flow is the loss of main feedwater with offsite power available. For this transient, a minimum EFW flow rate equivalent to 400 gpm at 1050 psia and no more than 130°F is adequate. Each of the three EFW pumps is capable of delivering this flow.

A 100% flowpath is defined as: The flowpath to either steam generator including associated values and piping capable of being supplied by either the turbine driven pump or the associated motor driven pump.

One flow indicator or steam generator level indicator per steam generator is sufficient to provide indication of emergency feedwater flow to the steam generators and to confirm emergency feedwater system operation. In the event that at least one indicator per steam generator is not available, then the flowpath to this steam generator is considered to be inoperable.

The EFW System is designed to start automatically in the event of loss of both main feedwater pumps as sensed by low hydraulic oil pressure. This specific automatic initiation logic is placed in service prior to criticality and may be bypassed when shutdown to present inadvertent actuation during startup and shutdown. All automatic initiation logic and control functions are independent from the Integrated Control System (ICS).

Normally, decay heat is removed by steam relief through the Turbine Bypass System to the condenser. Decay heat also can be also removed from the steam generators by steam relief through the main steam safety relief valves. The total relief capacity of the 16 main steam safety relief valves is 13,105,000 lbs./hr. In this case the minimum amount of water in the upper surge tank, condensate storage tank, and hotwell is sufficient to remove decay heat for at least 4 hours at hot shutdown conditions. This provides adequate time to establish normal flow through the condenser by restarting a Condenser Cooling Water (CCW) pump in a loss of station power events. The turbine bypass valves can then be utilized to relieve steam to the condenser and commence a cooldown of the RCS.

A 6 foot level in the upper surge tank will ensure that 30,000 gallons of water are available to the EFW pumps from that source. The 6 foot level setpoint includes an allowance for instrument error and for the depletion of inventory while switching to an alternate suction source.

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# Table 4.1-1 (CONTINUED)

<u>Channe</u>	Description	<u>Check</u>	Test	<u>Calibrate</u>	<u>Remarks</u>
<b>49</b> .	Emergency Feedwater Flow Indicators	мо	NA	RF	·
<b>50</b> .	PORV and Safety Valve Position Indicators	МО	NA.	RF ·	
51.	RPS Anticipatory Reactor Trip System Loss of Turbine Emergency Trip System Pressure Switches	NA	45 Days STB	RF	
52.	RPS Anticipatory Reactor Trip System Loss of Main Feedwater				
	a) Control Oil Pressure Switches	NA	45 Days STB	RF	
53.	Emergency Feedwater Initiation Circuits				
	a) Control Oil Pressure Switches	NA	ΜΟ	RF	
54.	Containment High Range Radiation Monitor (RIA-57, 58)	NA		RF	TMI ítem II.F.1.3
N					

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