

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

July 6, 1977

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Duke Power Company  
ATTN: Mr. William O. Parker, Jr.  
Vice President  
Steam Production  
Post Office Box 2178  
422 South Church Street  
Charlotte, North Carolina 28242

Gentlemen:

By letter dated June 16, 1977, we transmitted to you Amendments Nos. 41, 41 and 38 for Licenses Nos. DPR-38, DPR-47 and DPR-55 for the Oconee Nuclear Station, Units Nos. 1, 2 and 3.

Pages 3.5-8, 3.5-9 and 3.5-11 of the Technical Specifications transmitted with the amendments contained errors. Enclosed are corrected pages.

Sincerely,

Original signed by

A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

Enclosure:  
Corrected pages to  
Amendments Nos. 41,  
41 and 38

cc w/enclosures:  
See next page

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Duke Power Company

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July 6, 1977

cc: Mr. William L. Porter  
Duke Power Company  
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422 South Church Street  
Charlotte, North Carolina 28242

J. Micheal McGarry, III, Esquire  
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700 Shoreham Building  
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Washington, D.C. 20005

Oconee Public Library  
201 South Spring Street  
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Honorable James M. Phinney  
County Supervisor of Oconee County  
Walhalla, South Carolina 29621

Office of Intergovernmental Relations  
116 West Jones Street  
Raleigh, North Carolina 27603

Chief, Energy Systems  
Analyses Branch (AW-459)  
Office of Radiation Programs  
U. S. Environmental Protection Agency  
Room 645, East Tower  
401 M Street, S. W.  
Washington, D. C. 20460

U. S. Environmental Protection Agency  
Region IV Office  
ATTN: EIS COORDINATOR  
345 Coutland Street, N. E.  
Atlanta, Georgia 30308

(3) Except as provided in specification 3.5.2.4.b, the reactor shall be brought to the hot shutdown condition within four hours if the quadrant power tilt is not reduced to less than 3.41% Unit 1 within 24 hours.

3.41% Unit 2

3.41% Unit 3

- b. If the quadrant tilt exceeds +3.41% Unit 1 and there is simultaneous  
3.41% Unit 2  
3.41% Unit 3

indication of a misaligned control rod per Specification 3.5.2.2, reactor operation may continue provided power is reduced to 60% of the thermal power allowable for the reactor coolant pump combination.

- c. Except for physics test, if quadrant tilt exceeds 9.44% Unit 1,  
9.44% Unit 2  
9.44% Unit 3

a controlled shutdown shall be initiated immediately, and the reactor shall be brought to the hot shutdown condition within four hours.

- d. Whenever the reactor is brought to hot shutdown pursuant to 3.5.2.4.a(3) or 3.5.2.4.c above, subsequent reactor operation is permitted for the purpose of measurement, testing, and corrective action provided the thermal power and the power range high flux setpoint allowable for the reactor coolant pump combination are restricted by a reduction of 2 percent of full power for each 1 percent tilt for the maximum tilt observed prior to shutdown.

- e. Quadrant power tilt shall be monitored on a minimum frequency of once every two hours during power operation above 15 percent of rated power.

### 3.5.2.5 Control Rod Positions

- a. Technical Specification 3.1.3.5 does not prohibit the exercising of individual safety rods as required by Table 4.1-2 or apply to inoperable safety rod limits in Technical Specification 3.5.2.2.
- b. Except for physics tests, operating rod group overlap shall be  $25\% \pm 5\%$  between two sequential groups. If this limit is exceeded corrective measures shall be taken immediately to achieve an acceptable overlap. Acceptable overlap shall be attained within two hours, or the reactor shall be placed in a hot shutdown condition within an additional 12 hours.
- c. Except for physics tests or exercising control rods, the control rod withdrawal limits are specified on Figures 3.5.2-1A1 and 3.5.2-1A2, (Unit 1), 3.5.2-1B1, 3.5.2-1B2 and 3.5.2-1B3 (Unit 2), and 3.5.2-1C1, 3.5.2-1C2, and 3.5.2-1C3 (Unit 3) for four pump operation and on Figures 3.5.2-2A1, 3.5.2-2A2 (Unit 1), 3.5.2-2B1, 3.5.2-2B2 and 3.5.2-2B3 (Unit 2), and 3.5.2-2C1, 3.5.2-2C2, and 3.5.2-2C3 (Unit 3) for three or two pump

operation. If the control rod position limits are exceeded, corrective measures shall be taken immediately to achieve an acceptable control rod position. Acceptable control rod position shall then be attained within two hours. The minimum shutdown margin required by Specification 3.5.2.1 shall be maintained at all times.

- d. Except for physics tests, power shall not be increased above the power level cutoff as shown on Figures 3.5.2-1A1, 3.5.2-1A2 (Unit 1), 3.5.2-1B1, 3.5.2-1B2, and 3.5.2-1B3 (Unit 2), and 3.5.2-1C1, 3.5.2-1C2, 3.5.2-1C3 (Unit 3), unless the following requirements are met.
- (1) The xenon reactivity shall be within 10 percent of the value for operation at steady-state rated power.
  - (2) The xenon reactivity worth has passed its final maximum or minimum peak during its approach to its equilibrium value for operation at the power level cutoff.

3.5.2.6 Reactor power imbalance shall be monitored on a frequency not to exceed two hours during power operation above 40 percent rated power. Except for physics tests, imbalance shall be maintained within the envelope defined by Figures 3.5.2-3A1, 3.5.2-3A2, 3.5.2-3B1, 3.5.2-3B2, 3.5.2-3B3, 3.5.2-3C1, 3.5.2-3C2, and 3.5.2-3C3. If the imbalance is not within the envelope defined by these figures, corrective measures shall be taken to achieve an acceptable imbalance. If an acceptable imbalance is not achieved within two hours, reactor power shall be reduced until imbalance limits are met.

3.5.2.7 The control rod drive patch panels shall be locked at all times with limited access to be authorized by the manager or his designated alternate.

Control rod groups are withdrawn in sequence beginning with Group 1. Groups 5, 6, and 7 are overlapped 25 percent. The normal position at power is for Groups 6 and 7 to be partially inserted.

The quadrant power tilt limits set forth in Specification 3.5.2.4 have been established with consideration of potential effects of rod bowing and fuel densification to prevent the linear heat rate peaking increase associated with a positive quadrant power tilt during normal power operation from exceeding 5.10% for Unit 1. The limits shown in Specification 3.5.2.4

5.10% for Unit 2

5.10% for Unit 3

are measurement system independent. The actual operating limits, with the appropriate allowance for observability and instrumentation errors, for each measurement system are defined in the station operating procedures.

The quadrant tilt and axial imbalance monitoring in Specification 3.5.2.4 and 3.5.2.6, respectively, normally will be performed in the process computer. The two-hour frequency for monitoring these quantities will provide adequate surveillance when the computer is out of service.

Allowance is provided for withdrawal limits and reactor power imbalance limits to be exceeded for a period of two hours without specification violation. Acceptable rod positions and imbalance must be achieved within the two-hour time period or appropriate action such as a reduction of power taken.

Operating restrictions are included in Technical Specification 3.5.2.5d to prevent excessive power peaking by transient xenon. The xenon reactivity must be beyond its final maximum or minimum peak and approaching its equilibrium value at the power level cutoff.

#### REFERENCES

<sup>1</sup>FSAR, Section 3.2.2.1.2

<sup>2</sup>FSAR, Section 14.2.2.2

<sup>3</sup>FSAR, SUPPLEMENT 9

<sup>4</sup>B&W FUEL DENSIFICATION REPORT

BAW-1409 (UNIT 1)

BAW-1396 (UNIT 2)

BAW-1400 (UNIT 3)