

April 8, 1993

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

Distribution  
See next page

Mr. J. W. Hampton  
Vice President, Oconee Site  
Duke Power Company  
P. O. Box 1439  
Seneca, South Carolina 29679

Dear Mr. Hampton:

SUBJECT: ISSUANCE OF AMENDMENTS - OCONEE NUCLEAR STATION, UNITS 1, 2  
AND 3 (TAC NOS. M85633, M85634, AND M85635)

The Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 199, 199, and 196 to 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 (TS) in response to your application dated December 8, 1992.

The amendments (1) extend the time interval between Reactor Protection System (RPS) instrument channel tests from a month to 45 days on a staggered time basis, (2) define "staggered time basis," and (3) remove the time limitation on placing one RPS channel in bypass and one channel in the tripped condition.

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,  
ORIGINAL SIGNED BY:  
Leonard A. Wiens, Project Manager  
Project Directorate II-3  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 199 to DPR-38
2. Amendment No. 199 to DPR-47
3. Amendment No. 196 to DPR-55
4. Safety Evaluation

FILE CENTER COPY

cc w/enclosures:  
See next page

OFC : PDII-3/A : PDII-3/PM : PDII-3/PE : OGC : PDII-3/D : NICB  
 NAME : LBERRY : LWIENS:cw : SKIBSIS : Rbachmann : DMATTHEWS : JWERMIEL  
 DATE : 3/16/93 : 3/23/93 : 3/17/93 : 3/25/93 : 4/8/93 : 3/24/93

OFFICIAL RECORD COPY  
File Name: G:\OCONEE\OC085633.AMD

9304160155 930408  
PDR ADOCK 05000269  
P PDR

CP-1  
DFOI

DATED: APRIL 8, 1993

AMENDMENT NO. 199 OCONEE UNIT 1  
AMENDMENT NO. 199 OCONEE UNIT 2  
AMENDMENT NO. 196 OCONEE UNIT 3

DISTRIBUTION:

~~Docket File~~  
NRC & Local PDRs  
PD II-3 R/F  
Plant R/F  
S. Varga 14-E-4  
G. Lainas 14-H-3  
D. Matthews 14-H-25  
L. Berry 14-H-25  
L. Wiens 14-H-25  
OGC-WF 15-B-18  
D. Hagan MNBB 4702  
G. Hill ( 6) P1-22  
W. Jones MNBB 7103  
C. Grimes 11-F-23  
ACRS (10) P-135  
PA 2-G-5  
OC/LFMB MNBB4702  
E. Merschoff RII



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

April 8, 1993

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

Mr. J. W. Hampton  
Vice President, Oconee Site  
Duke Power Company  
P. O. Box 1439  
Seneca, South Carolina 29679

Dear Mr. Hampton:

SUBJECT: ISSUANCE OF AMENDMENTS - OCONEE NUCLEAR STATION, UNITS 1, 2,  
AND 3 (TAC NOS. M85633, M85634, AND M85635)

The Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 199, 199, and 196 to 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 (TS) in response to your application dated December 8, 1992.

The amendments (1) extend the time interval between Reactor Protection System (RPS) instrument channel tests from a month to 45 days on a staggered time basis, (2) define "staggered time basis," and (3) remove the time limitation on placing one RPS channel in bypass and one channel in the tripped condition.

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,

A handwritten signature in dark ink, appearing to read "Leonard A. Wiens".

Leonard A. Wiens, Project Manager  
Project Directorate II-3  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 199 to DPR-38
2. Amendment No. 199 to DPR-47
3. Amendment No. 196 to DPR-55
4. Safety Evaluation

cc w/enclosures:  
See next page

Mr. J. W. Hampton  
Duke Power Company

Oconee Nuclear Station

cc:

Mr. A. V. Carr, Esquire  
Duke Power Company  
422 South Church Street  
Charlotte, North Carolina 28242-0001

Mr. M. E. Patrick  
Compliance  
Duke Power Company  
Oconee Nuclear Site  
P. O. Box 1439  
Seneca, South Carolina 29679

J. Michael McGarry, III, Esquire  
Winston and Strawn  
1400 L Street, NW.  
Washington, DC 20005

Mr. Alan R. Herdt, Chief  
Project Branch #3  
U. S. Nuclear Regulatory Commission  
101 Marietta Street, NW. Suite 2900  
Atlanta, Georgia 30323

Mr. Robert B. Borsum  
Babcock & Wilcox  
Nuclear Power Division  
Suite 525  
1700 Rockville Pike  
Rockville, Maryland 20852

Ms. Karen E. Long  
Assistant Attorney General  
North Carolina Department of  
Justice  
P. O. Box 629  
Raleigh, North Carolina 27602

Manager, LIS  
NUS Corporation  
2650 McCormick Drive, 3rd Floor  
Clearwater, Florida 34619-1035

Mr. G. A. Copp  
Licensing - EC050  
Duke Power Company  
P. O. Box 1006  
Charlotte, North Carolina 28201-1006

Senior Resident Inspector  
U. S. Nuclear Regulatory Commission  
Route 2, Box 610  
Seneca, South Carolina 29678

Regional Administrator, Region II  
U. S. Nuclear Regulatory Commission  
101 Marietta Street, NW. Suite 2900  
Atlanta, Georgia 30323

Mr. Heyward G. Shealy, Chief  
Bureau of Radiological Health  
South Carolina Department of Health  
and Environmental Control  
2600 Bull Street  
Columbia, South Carolina 29201

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

County Supervisor of Oconee County  
Walhalla, South Carolina 29621



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

DUKE POWER COMPANY

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 199  
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 8, 1992, 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:

9304160158 930408  
PDR ADOCK 05000269  
P PDR

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 199, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, Director  
Project Directorate II-3  
Division of Reactor Projects-I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Technical Specification  
Changes

Date of Issuance: April 8, 1993



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

DUKE POWER COMPANY

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.199  
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 8, 1992, 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. 199, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, Director  
Project Directorate II-3  
Division of Reactor Projects-I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Technical Specification  
Changes

Date of Issuance: April 8, 1993



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

DUKE POWER COMPANY

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 196  
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 8, 1992, 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:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 196, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, Director  
Project Directorate II-3  
Division of Reactor Projects-I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Technical Specification  
Changes

Date of Issuance: April 8, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 199

FACILITY OPERATING LICENSE NO. DPR-38

DOCKET NO. 50-269

AND

TO LICENSE AMENDMENT NO. 199

FACILITY OPERATING LICENSE NO. DPR-47

DOCKET NO. 50-270

AND

TO LICENSE AMENDMENT NO. 196

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

1-4  
3.5-2  
3.5-5c  
4.1-2  
4.1-3  
4.1-4  
4.1-8  
4.1-8a

Insert Pages

1-4  
3.5-2  
3.5-5c  
4.1-2  
4.1-3  
4.1-4  
4.1-8  
4.1-8a

#### 1.5.5 Heat Balance Check

A heat balance check is a comparison of the indicated neutron power and core thermal power.

#### 1.5.6 Heat Balance Calibration

An adjustment of the power range channel amplifiers output to agree with the core thermal power as determined by a heat balance on the secondary side of the steam generator considering all heat losses and additions.

#### 1.5.7 Staggered Test Basis

A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during  $n$  Surveillance Frequency intervals, where  $n$  is the total number of systems, subsystems, channels, or other designated components in the associated function.

### 1.6 POWER DISTRIBUTION

#### 1.6.1 Quadrant Power Tilt

Quadrant power tilt is defined by the following equation and is expressed in percent.

$$100 \times \frac{\text{Power in any core quadrant}}{\text{Average power of all quadrants}} - 1$$

#### 1.6.2 Reactor Power Imbalance

Reactor power imbalance is the power in the top half of the core minus the power in the bottom half of the core expressed as a percentage of rated power. Imbalance is monitored continuously by the RPS using input from the power range channels. Imbalance limits are defined in Specification 2.1 and imbalance setpoints are defined in Specification 2.3.

### 1.7 CONTAINMENT INTEGRITY

Containment integrity exists when the following conditions are satisfied:

- a. The equipment hatch is closed and sealed and both doors of the personnel hatch and emergency hatch are closed and sealed except as in b below.
- b. At least one door of the personnel hatch and the emergency hatch is closed and sealed during refueling or during personnel passage through these hatches.
- c. All non-automatic containment isolation valves and blind flanges are closed as required.
- d. All automatic containment isolation valves are operable or locked closed.
- e. The containment leakage determined at the last testing interval satisfies Specification 4.4.1.

## Bases

Every reasonable effort will be made to maintain all safety instrumentation in operation. A startup is not permitted unless three power range neutron instrument channels and three channels each of the following are operable: reactor coolant temperature, reactor coolant pressure, pressure-temperature, flux-imbalance flow, power-number of pumps, and high reactor building pressure. The engineered safety features actuation system must have three analog channels and two digital channels functioning correctly prior to a startup. Additional operability requirements are provided by Technical Specifications 3.1.12 and 3.4 for equipment which is not part of the RPS or ESFAS.

Operation at rated power is permitted as long as the systems have at least the minimum number of operable channels given in Column C (Table 3.5.1-1). This is in agreement with redundancy and single failure criteria of IEEE-279 as described in FSAR Section 7.

There are four reactor protective channels. A fifth channel that is isolated from the reactor protective system is provided as a part of the reactor control system. Normal trip logic is two out of four. The minimum number of operable channels required is three. While a bypassed channel is considered inoperable, a channel placed in the tripped condition is considered operable. Thus, only one channel may be placed in bypass at any one time in order to maintain the minimum number of required channels. This results in a trip logic of two out of three. It should be noted that an effective trip logic of one out of two can be achieved by placing one channel in bypass and one channel in the tripped condition.

The four reactor protective channels are provided with key operated bypass switches to allow on-line testing or maintenance on only one channel at a time during power operation. Each channel is provided alarm and lights to indicate when that channel is bypassed. There will be one reactor protective system bypass switch key permitted in the control room. That key will be under the administrative control of the Shift Supervisor. Spare keys will be maintained in a locked storage accessible only to the Station Manager.

Each reactor protective channel key operated shutdown bypass switch is provided with alarm and lights to indicate when the shutdown bypass switch is being used. There are four shutdown bypass keys in the control room under the administrative control of the Shift Supervisor. The use of a key operated shutdown bypass switch for on-line testing or maintenance during reactor power operation has no significance when used in conjunction with a key operated channel bypass switch since the channel trip relay is locked in the untripped state. The use of a key operated shutdown bypass switch alone during power operation will cause the channel to trip. When the shutdown bypass switch is operated for on-line testing or maintenance during reactor power operation, reactor power and RCS pressure limits as specified in Table 2.3-1 are not applicable.

The source range and intermediate range nuclear instrumentation overlap by one decade of neutron flux. This decade overlap will be achieved at  $10^{-10}$  amps on the intermediate range instrument.

Power is normally supplied to the control rod drive mechanisms from two separate parallel 600 volt sources. Each voltage source and its associated breakers and SCR control relays comprise a trip system. Thus, the two trip systems and their associated trip devices form a 1-out-of-2 logic used twice which is referred to as a 1-out-of-2x2 logic.

## INSTRUMENTS OPERATING CONDITIONS (cont'd)

NOTES:

- (a) For channel testing, calibration, or maintenance, the minimum of three operable channels may be maintained by placing one channel in bypass and one channel in the tripped condition, leaving an effective one out of two trip logic.
- (b) When 2 of 4 power range instrument channels are greater than 10% rated power, hot shutdown is not required.
- (c) When 1 of 2 intermediate range instrument channels is greater than  $10^{-10}$  amps, hot shutdown is not required.
- (d) (Deleted)
- (e) If minimum conditions are not met within 48 hours after hot shutdown, the unit shall be in the cold shutdown within 24 hours.
- (f)
  1. Place the inoperable Reactor Trip Module output in the tripped condition within one hour or
  2. Remove the power supplied to the control rod trip devices associated with the inoperable Reactor Trip Module within one hour.
- (g) (Deleted)
- (h) The RCP monitors provide inputs to this logic. For operability to be met either all RCP monitor channels must be operable or 3 operable with the remaining channel in the tripped state.
- (i)
  1. The power supplied to the control rod drive mechanisms through the failed CRD Trip Breaker shall be removed within one hour or
  2. With one of the CRD Trip Breaker diverse features (undervoltage or shunt trip device) inoperable, restore it to OPERABLE status in 48 hours or place the breaker in trip in the next hour.
- (j)
  1. With one SCR Control Relay inoperable in logic channel C or D, restore the inoperable SCR Control Relay to OPERABLE status in 48 hours or remove power from the CRD mechanisms supplied by the inoperable channel's SCR Control Relay within the next hour.
  2. With two or more SCR Control Relays inoperable in logic channel C or D, remove power from the CRD mechanisms supplied by the inoperable channel's SCR Control Relay within one hour.

instrumentation errors induced by drift can be expected to remain within acceptable tolerances if recalibration is performed at the intervals specified.

Substantial calibration shifts within a channel (essentially a channel failure) are revealed during routine checking and testing procedures. Thus, the minimum calibration frequencies set forth are considered acceptable.

Periodic use of the Incore Instrumentation System for power mapping is sufficient to assure that axial and radial power peaks and the peak locations are controlled in accordance with the provisions of the Technical Specifications.

#### REFERENCE

- (1) FSAR, Section 7.2.3.4.
- (2) BAW-10167A, "Justification for Increasing the Reactor Trip System On-line Test Interval."

Table 4.1-1  
INSTRUMENT SURVEILLANCE REQUIREMENTS

<u>Channel Description</u>	<u>Check</u>	<u>Test</u>	<u>Calibrate</u>	<u>Remarks</u>
1. Protective Channel Coincidence Logic in the Reactor Trip Modules	NA	MO	NA	
2. Control Rod Drive Trip Breakers, SCR Control Relays E and F	NA	MO(1)	NA	(1) This test shall independently confirm the operability of the shunt trip device and the undervoltage device.
3. Power Range Amplifier	ES(1)	NA	(1)	(1) Heat balance check each shift. Heat balance calibration whenever indicated core thermal power exceeds neutron power by more than 2 percent.
4. Power Range	ES	45 Days STB	MO(1)(2)	(1) Using incore instrumentation. (2) Axial offset upper and lower chambers after each startup if not done previous week.
5. Intermediate Range	ES(1)	PS	NA	(1) When in service.
6. Source Range	ES(1)	PS	NA	(1) When in service.
7. Reactor Coolant Temperature	ES	45 Days STB	RF	
8. High Reactor Coolant Pressure	ES	45 Days STB	RF	
9. Low Reactor Coolant Pressure	ES	45 Days STB	RF	
10. Flux-Reactor Coolant Flow Comparator	ES	45 Days STB	RF	
11. Reactor Coolant Pressure Temperature Comparator	ES	45 Days STB	RF	

Oconee Units 1, 2, and 3

4.1-3

Amendment No. 199 (Unit 1)  
 Amendment No. 199 (Unit 2)  
 Amendment No. 196 (Unit 3)

Oconee Units 1, 2, and 3

4.1-4

Amendment No. 199 (Unit 1)  
 Amendment No. 199 (Unit 2)  
 Amendment No. 196 (Unit 3)

Table 4.1-1 (CONTINUED)

<u>Channel Description</u>	<u>Check</u>	<u>Test</u>	<u>Calibrate</u>	<u>Remarks</u>
12. Pump-Flux Comparator	ES	45 Days STB	RF	
13. High Reactor Building Pressure	DA	45 Days STB	RF	
14. High Pressure Injection & Reactor Building Isolation Logic (Non-essential systems)	NA	MO	NA	Includes Reactor Building Isolation of non-essential systems
15. High Pressure Injection Analog Channels:				
a. Reactor Coolant Pressure	ES	MO	RF	
b. Reactor Building Pressure (4 psig)	ES	MO	RF	
16. Low Pressure Injection Logic	NA	MO	NA	
17. Low Pressure Injection Analog Channels:				
a. Reactor Coolant Pressure	ES	MO	RF	
b. Reactor Building Pressure (4 psig)	ES	MO	RF	
18. Reactor Building Emergency Cooling and Isolation System Logic (Essential Systems)	NA	MO	NA	Reactor Building isolation includes essential systems
19. Reactor Building Emergency Cooling and Isolation System Analog Channel Reactor Building Pressure (4 psig)	ES	MO	RF	

Table 4.1-1 (CONTINUED)

<u>Channel Description</u>	<u>Check</u>	<u>Test</u>	<u>Calibrate</u>	<u>Remarks</u>
49. Emergency Feedwater Flow Indicators	MO	NA	RF	
50. PORV and Safety Valve Position Indicators	MO	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	
b) Discharge Pressure Switches	NA	45 Days STB	RF	
53. Emergency Feedwater Initiation Circuits				
a) Control Oil Pressure Switches	NA	MO	RF	
b) Discharge Pressure Switches	NA	MO	RF	
54. Containment High Range Radiation Monitor (RIA-57, 58)	NA	MO	RF	TMI Item II.F.1.3

Oconee Units 1, 2, and 3

4.1-8

Amendment No. 199 (Unit 1)  
 Amendment No. 199 (Unit 2)  
 Amendment No. 196 (Unit 3)

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	RF	
59. Reactor Vessel Head Level	NA	RF	RF	
60. Core Exit Thermocouples	MO	NA	RF	
61. Subcooling Monitors	MO	RF	RF	

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

Oconee Units 1, 2, and 3

4.1-8a

Amendment No. 199 (Unit 1)  
 Amendment No. 199 (Unit 2)  
 Amendment No. 196 (Unit 3)



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 199 TO FACILITY OPERATING LICENSE DPR-38  
AMENDMENT NO. 199 TO FACILITY OPERATING LICENSE DPR-47  
AND AMENDMENT NO. 196 TO FACILITY OPERATING LICENSE DPR-55

DUKE POWER COMPANY

OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3

DOCKET NOS. 50-269, 50-270, AND 50-287

1.0 INTRODUCTION

By letter dated December 8, 1992, Duke Power Company (the licensee) submitted a request for changes to the Oconee Nuclear Station, Units 1, 2, and 3 Technical Specifications (TS). The requested changes would (1) extend the frequency of the Reactor Protection System (RPS) instrument channel tests in Table 4.1-1 from monthly to every 45 days on a staggered test basis, (2) add the definition of "staggered test basis" to TS Section 1.5, and (3) remove the time limitation in Table 3.5.1-1 on placing one RPS channel in bypass and one channel in the tripped condition. Also, the Bases would be revised to be consistent with the above changes.

The technical justification for the proposed changes was provided in Topical Report BAW-10167, Supplement 1, "Justification for Increasing the Reactor Trip System On-Line Test Intervals," and BAW-10167, Supplement 2, "Justification for Increasing the Reactor Trip System On-Line Test Intervals - Additional Information on Allowed Outage Times." Safety evaluations of this report and its supplements were performed by the NRC staff, and the staff's evaluation reports and recommendations were included in the approved version of the topical report, BAW-10167A, submitted to the NRC on July 17, 1992.

2.0 EVALUATION

2.1 Instrument Drift

In its safety evaluation of BAW-10167, Supplement 1, the staff recommended that each licensee confirm that it has reviewed drift information for each RPS instrument channel over a period of two to three years and determined that setpoint drift over the extended surveillance test interval would not exceed the value allowed by its setpoint methodology. Records of these data and calculations should be maintained onsite for future NRC audits. In its amendment request, the Oconee licensee confirmed that it has reviewed drift information for each RPS instrument channel and determined that drift occurring over the 180-day test interval would not cause the setpoint value to

9304160162 930408  
PDR ADOCK 05000269  
P PDR

exceed the allowable value for that channel. The staff, therefore, finds the rate of instrument drift is within acceptable limits.

## 2.2 Definition of "Staggered Test Basis"

The revised surveillance test intervals in TS Table 4.1-1, "Instrument Surveillance Requirements," have been changed to "45 days on a staggered test basis." This requires the performance of the channel test of one of the four RPS channels every 45 days, so that all four channels have been tested in a 180-day period. The licensee proposes to add the definition of "staggered test basis" as TS 1.5.7. The staff finds the proposed definition to be acceptable.

## 2.3 TS Table 4.1-1 "Instrument Surveillance Requirements"

Currently, RPS instrument channel tests are required to be performed monthly. The analyses provided in BAW-10167A justify performing the RPS instrument channel tests on a 45-day staggered test basis. The NRC staff has reviewed the analyses provided in BAW-10167A and concluded in its Safety Evaluation Report that the topical report was acceptable for justifying the proposed extensions of the surveillance test intervals to 45 days on a staggered test basis. Therefore, the staff finds the proposed revisions to TS Table 4.1-1 acceptable.

## 2.4 Allowable Outage Times of RPS Channels

The current TS (Table 3.5.1-1) allow one of the four RPS channels to be placed in bypass and one channel to be placed in trip, leaving an effective one out of two trip logic, for a maximum of 4 hours. The analyses provided in BAW-10167A justify the proposed removal of this time restriction.

The NRC staff has reviewed the risk analyses and additional information included in BAW-10167A and finds that an indefinite bypass of an inoperable instrument string, with one channel already in the tripped condition, will not significantly reduce the reliability of the reactor trip system to trip on demand or reduce the protection against spurious trips. Therefore, the staff concludes that the proposed revisions to TS Table 3.5.1-1, allowing an indefinite repair time for one inoperable channel, are acceptable. The staff expects, however, that the licensee will give high priority to the repair of a bypassed channel.

## 2.5 Bases

The Bases for TS 3.5.1 have been revised to be consistent with the changes to TS Table 3.5.1-1. The Bases for TS 4.1 have been updated to include a reference to BAW-10167A.

## 3.0 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.

#### 4.0 ENVIRONMENTAL CONSIDERATION

The amendments change surveillance requirements. 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 (58 FR 12259 dated March 3, 1993). 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.

#### 5.0 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: S. S. Kirslis

Date: April 8, 1993