

May 28, 1998

Mr. C. S. Hinnant, Vice President  
Carolina Power & Light Company  
Brunswick Steam Electric Plant  
Post Office Box 10429  
Southport, North Carolina 28461

SUBJECT: ISSUANCE OF AMENDMENT NO. 197 TO FACILITY OPERATING LICENSE  
NO. DPR-71 AND AMENDMENT NO. 227 TO FACILITY OPERATING  
LICENSE NO. DPR-62 REVISING TECHNICAL SPECIFICATION (TS)  
MODIFYING INSTRUMENTATION ALLOWABLE VALUES - BRUNSWICK  
STEAM ELECTRIC PLANT, UNITS 1 AND 2 (TAC NOS. MA0174 AND MA0175)

Dear Mr. Hinnant:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 197 to Facility Operating License No. DPR-71 and Amendment No. 227 to Facility Operating License No. DPR-62 for Brunswick Steam Electric Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated October 28, 1997.

The amendments revise certain instrumentation allowable values in the Technical Specifications.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's bi-weekly Federal Register Notice.

Sincerely,

Original signed by:

David C. Trimble, Project Manager  
Project Directorate II-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket Nos. 50-325  
and 50-324

Enclosures:

1. Amendment No. 197 to  
License No. DPR-71
2. Amendment No. 227 to  
License No. DPR-62
3. Safety Evaluation

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cc w/enclosures: See next page

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PM:PDII-1	LA:PDII-1	OGC	APD:PDII-1	
DTrimble	EDunnington	RBachmann	PTKuo	
5/13/98	5/13/98	5/14/98	5/28/98	
Yes/No	Yes/No	Yes/No	Yes/No	

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Mr. C. S. Hinnant  
Carolina Power & Light Company

cc:

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Brunswick County Board of Commissioners  
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AMENDMENT NO. 197 TO FACILITY OPERATING LICENSE NO. DPR-71 - BRUNSWICK,  
UNIT 1 AND AMENDMENT NO. 227 TO FACILITY OPERATING LICENSE NO. DPR-62 -  
BRUNSWICK, UNIT 2

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J. Zwolinski

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G. Hill (4)

T. Collins

ACRS

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L. Plisco, RII

cc: Brunswick Service List

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

CAROLINA POWER & LIGHT COMPANY, et al.

DOCKET NO. 50-325

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 197  
License No. DPR-71

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by Carolina Power & Light Company (the licensee), dated October 28, 1997, 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 2.C.(2) of Facility Operating License No. DPR-71 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 197, are hereby incorporated in the license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Pao-Tsin Kuo, Acting Director *for*  
Project Directorate II-1  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: May 28, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 197

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

Remove Pages

2-4  
3/4 3-19  
3/4 3-39  
3/4 3-40  
3/4 3-90  
3/4 3-95

Insert Pages

2-4  
3/4 3-19  
3/4 3-39  
3/4 3-40  
3/4 3-90  
3/4 3-95

TABLE 2.2.1-1  
REACTOR PROTECTION SYSTEM INSTRUMENTATION SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
1. Intermediate Range Monitor, Neutron Flux - High <sup>(a)</sup>	≤ 120 divisions of full scale	≤ 120 divisions of full scale
2. Average Power Range Monitor		
a. Neutron Flux - High, 15% <sup>(b)</sup>	≤ 15% of RATED THERMAL POWER	≤ 15% of RATED THERMAL POWER
b. Flow-Biased Simulated Thermal Power - High <sup>(c)(d)</sup>	≤ (0.66W + 59.6%) with a maximum ≤ 113.6% of RATED THERMAL POWER	≤ (0.66W + 61%) with a maximum ≤ 115.3% of RATED THERMAL POWER
c. Fixed Neutron Flux - High <sup>(d)</sup>	≤ 116.3% of RATED THERMAL POWER	≤ 118.5% of RATED THERMAL POWER
3. Reactor Vessel Steam Dome Pressure - High	≤ 1067.9 psig	≤ 1077 psig
4. Reactor Vessel Water Level - Low, Level 1	≥ +153.2 inches <sup>(g)</sup>	≥ +153 inches <sup>(g)</sup>
5. Main Steam Line Isolation Valve - Closure <sup>(e)</sup>	≤ 10% closed	≤ 10% closed
6. (Deleted)		
7. Drywell Pressure - High	≤ 2 psig	≤ 2 psig
8. Scram Discharge Volume Water Level - High	≤ 109 gallons	≤ 109 gallons
9. Turbine Stop Valve - Closure <sup>(f)</sup>	≤ 10% closed	≤ 10% closed
10. Turbine Control Valve Fast Closure, Control Oil Pressure - Low <sup>(f)</sup>	≥ 500 psig	≥ 500 psig

TABLE 3.3.2-2 (Continued)  
ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
<u>2. SECONDARY CONTAINMENT ISOLATION</u>		
a. Reactor Building Exhaust Radiation - High	$\leq 11$ mr/hr	$\leq 11$ mr/hr
b. Drywell Pressure - High	$\leq 2$ psig	$\leq 2$ psig
c. Reactor Vessel Water Level - Low, Level 2	$\geq + 104.1$ inches <sup>(a)</sup>	$\geq + 101$ inches <sup>(a)</sup>
<u>3. REACTOR WATER CLEANUP SYSTEM ISOLATION</u>		
a. $\Delta$ Flow - High	$\leq 73$ gal/min	$\leq 73$ gal/min
b. Area Temperature - High	$\leq 150^{\circ}\text{F}$	$\leq 150^{\circ}\text{F}$
c. Area Ventilation $\Delta$ Temperature - High	$\leq 50^{\circ}\text{F}$	$\leq 50^{\circ}\text{F}$
d. SLCS Initiation	NA	NA
e. Reactor Vessel Water Level - Low, Level 2	$\geq + 104.1$ inches <sup>(a)</sup>	$\geq + 101$ inches <sup>(a)</sup>
f. $\Delta$ Flow - High - Time Delay	$\leq 30$ minutes	$\leq 30$ minutes
g. Piping Outside RWCU Rooms Area Temperature - High	$\leq 120^{\circ}\text{F}$	$\leq 120^{\circ}\text{F}$



TABLE 3.3.3-2

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
<u>1. CORE SPRAY SYSTEM</u>		
a. Reactor Vessel Water Level - Low, Level 3	$\geq + 14.1$ inches <sup>(b)</sup>	$\geq + 13$ inches <sup>(b)</sup>
b. Reactor Steam Dome Pressure - Low	$\geq 406.7$ psig	$\geq 402$ psig
c. Drywell Pressure - High	$\leq 2$ psig	$\leq 2$ psig
d. Time Delay-Relay	$14 \leq t \leq 16$ secs	$14 \leq t \leq 16$ secs
e. Bus Power Monitor	NA	NA
<u>2. LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM</u>		
a. Drywell Pressure - High	$\leq 2$ psig	$\leq 2$ psig
b. Reactor Vessel Water Level - Low, Level 3	$\geq + 14.1$ inches <sup>(b)</sup>	$\geq + 13$ inches <sup>(b)</sup>
c. Reactor Vessel Shroud Level	$\geq - 53$ inches <sup>(b)</sup>	$\geq - 53$ inches <sup>(b)</sup>
d. Reactor Steam Dome Pressure - Low		
1. RHR Pump Start and LCPI Valve Actuation	$\geq 406.7$ psig	$\geq 402$ psig
2. Recirculation Pump Discharge Valve Actuation	$\geq 306.7$ psig	$\geq 302$ psig
e. RHR Pump Start - Time Delay Relay	$9 \leq t \leq 11$ seconds	$9 \leq t \leq 11$ seconds
f. Bus Power Monitor	NA	NA

TABLE 3.3.3-2 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
<u>3. HIGH PRESSURE COOLANT INJECTION SYSTEM</u>		
a. Reactor Vessel Water Level - Low, Level 2	$\geq + 104.1$ inches <sup>(b)</sup>	$\geq + 101$ inches <sup>(b)</sup>
b. Drywell Pressure - High	$\leq 2$ psig	$\leq 2$ psig
c. Condensate Storage Tank Level - Low	$\geq 23$ feet 4 inches	$\geq 23$ feet 4 inches
d. Suppression Chamber Water Level - High	$\leq -2$ feet <sup>(c)</sup>	$\leq -2$ feet <sup>(c)</sup>
e. Bus Power Monitor	NA	NA
<u>4. AUTOMATIC DEPRESSURIZATION SYSTEM</u>		
a. ADS Inhibit Switch	NA	NA
b. Reactor Vessel Water Level - Low, Level 3	$\geq + 14.1$ inches <sup>(b)</sup>	$\geq + 13$ inches <sup>(b)</sup>
c. Reactor Vessel Water Level - Low, Level 1	$\geq + 153.2$ inches <sup>(b)</sup>	$\geq + 153$ inches <sup>(b)</sup>
d. ADS Timer	$\leq 83$ seconds	$\leq 108$ seconds
e. Core Spray Pump Discharge Pressure - High	$\geq 112.1$ psig	$\geq 102$ psig
f. RHR (LPCI MODE) Pump Discharge Pressure - High	$\geq 111.1$ psig	$\geq 102$ psig
g. Bus Power Monitor	NA	NA

TABLE 3.3.6.1-2

ATWS RECIRCULATION PUMP TRIP SYSTEM INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>	
1. Reactor Vessel Water Level - Low, Level 2	$\geq + 104.1$ inches <sup>(a)</sup>	$\geq + 101$ inches <sup>(a)</sup>	
2. Reactor Vessel Pressure - High	$\leq 1137.8$ psig	$\leq 1147$ psig	

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<sup>(a)</sup> Vessel water levels refer to REFERENCE LEVEL ZERO.

TABLE 3.3.7-2REACTOR CORE ISOLATION COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
1. Reactor Vessel Water Level - Low, Level 2	$\geq + 104.1$ inches <sup>(a)</sup>	$\geq + 101$ inches <sup>(a)</sup>
2. Reactor Vessel Water Level - High	$\leq + 206.8$ inches <sup>(a)</sup>	$\leq + 207$ inches <sup>(a)</sup>
3. Condensate Storage Tank Level - Low	$\geq 23$ feet 0 inches	$\geq 23$ feet 0 inches

(a) Vessel water levels refer to REFERENCE LEVEL ZERO.



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

CAROLINA POWER & LIGHT COMPANY, et al.

DOCKET NO. 50-324

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 227  
License No. DPR-62

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by Carolina Power & Light Company (the licensee), dated October 28, 1997, 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 2.C.(2) of Facility Operating License No. DPR-62 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 227, are hereby incorporated in the license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, appearing to read "Pao-Tsin Kuo".

Pao-Tsin Kuo, Acting Director *for*  
Project Directorate II-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: May 28, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 227

FACILITY OPERATING LICENSE NO. DPR-62

DOCKET NO. 50-324

Replace the following pages of Appendix A Technical Specifications with the enclosed pages.  
The revised areas are indicated by marginal lines.

Remove Pages

2-4  
3/4 3-18  
3/4 3-19  
3/4 3-39  
3/4 3-40  
3/4 3-91  
3/4 3-102

Insert Pages

2-4  
3/4 3-18  
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3/4 3-40  
3/4 3-91  
3/4 3-102

TABLE 2.2.1-1  
REACTOR PROTECTION SYSTEM INSTRUMENTATION SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
1. Intermediate Range Monitor, Neutron Flux - High <sup>(a)</sup>	≤ 120 divisions of full scale	≤ 120 divisions of full scale
2. Average Power Range Monitor		
a. Neutron Flux - High, 15% <sup>(b)</sup>	≤ 15% of RATED THERMAL POWER	≤ 15% of RATED THERMAL POWER
b. Flow-Biased Simulated Thermal Power - High <sup>(c)(d)</sup>	≤ (0.66W + 59.6%) with a maximum ≤ 113.6% of RATED THERMAL POWER	≤ (0.66W + 61%) with a maximum ≤ 115.3% of RATED THERMAL POWER
c. Fixed Neutron Flux - High <sup>(d)</sup>	≤ 116.3% of RATED THERMAL POWER	≤ 118.5% of RATED THERMAL POWER
3. Reactor Vessel Steam Dome Pressure - High	≤ 1067.9 psig	≤ 1077 psig
4. Reactor Vessel Water Level - Low, Level 1	≥ +153.2 inches <sup>(g)</sup>	≥ +153 inches <sup>(g)</sup>
5. Main Steam Line Isolation Valve - Closure <sup>(e)</sup>	≤ 10% closed	≤ 10% closed
6. (Deleted)		
7. Drywell Pressure - High	≤ 2 psig	≤ 2 psig
8. Scram Discharge Volume Water Level - High	≤ 109 gallons	≤ 109 gallons
9. Turbine Stop Valve - Closure <sup>(f)</sup>	≤ 10% closed	≤ 10% closed
10. Turbine Control Valve Fast Closure, Control Oil Pressure - Low <sup>(f)</sup>	≥ 500 psig	≥ 500 psig



TABLE 3.3.2-2

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
<u>1. PRIMARY CONTAINMENT ISOLATION</u>		
a. Reactor Vessel Water Level -		
1. Low, Level 1	$\geq + 153.2$ inches <sup>(a)</sup>	$\geq + 153$ inches <sup>(a)</sup>
2. Low, Level 3	$\geq + 14.1$ inches <sup>(a)</sup>	$\geq + 13$ inches <sup>(a)</sup>
b. Drywell Pressure - High	$\leq 2$ psig	$\leq 2$ psig
c. Main Steam Line		
1. (Deleted)		
2. Pressure - Low	$\geq 825$ psig	$\geq 825$ psig
3. Flow - High	$\leq 137\%$ of rated flow	$\leq 138\%$ of rated flow
4. Flow - High	$\leq 30\%$ of rated flow	$\leq 33\%$ of rated flow
d. Main Steam Line Tunnel Temperature - High	$\leq 200^{\circ}\text{F}$	$\leq 200^{\circ}\text{F}$
e. Condenser Vacuum - Low	$\geq 7.6$ inches Hg vacuum	$\geq 7.5$ inches Hg vacuum
f. Turbine Building Area Temperature - High	$\leq 200^{\circ}\text{F}$	$\leq 200^{\circ}\text{F}$
g. Main Stack Radiation - High	(b)	(b)
h. Reactor Building Exhaust Radiation - High	$\leq 11$ mr/hr	$\leq 11$ mr/hr

TABLE 3.3.2-2 (Continued)  
ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
<u>2. SECONDARY CONTAINMENT ISOLATION</u>		
a. Reactor Building Exhaust Radiation - High	$\leq 11$ mr/hr	$\leq 11$ mr/hr
b. Drywell Pressure - High	$\leq 2$ psig	$\leq 2$ psig
c. Reactor Vessel Water Level - Low, Level 2	$\geq + 104.1$ inches <sup>(a)</sup>	$\geq + 101$ inches <sup>(a)</sup>
<u>3. REACTOR WATER CLEANUP SYSTEM ISOLATION</u>		
a. $\Delta$ Flow - High	$\leq 73$ gal/min	$\leq 73$ gal/min
b. Area Temperature - High	$\leq 150^{\circ}\text{F}$	$\leq 150^{\circ}\text{F}$
c. Area Ventilation Temperature $\Delta$ Temp - High	$\leq 50^{\circ}\text{F}$	$\leq 50^{\circ}\text{F}$
d. SLCS Initiation	NA	NA
e. Reactor Vessel Water Level - Low, Level 2	$\geq + 104.1$ inches <sup>(a)</sup>	$\geq + 101$ inches <sup>(a)</sup>
f. $\Delta$ Flow - High - Time Delay	$\leq 30$ minutes	$\leq 30$ minutes
g. Piping Outside RWCU Rooms Area Temperature - High	$\leq 120^{\circ}\text{F}$	$\leq 120^{\circ}$

TABLE 3.3.3-2

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
<u>1. CORE SPRAY SYSTEM</u>		
a. Reactor Vessel Water Level - Low, Level 3	$\geq + 14.1$ inches <sup>(b)</sup>	$\geq + 13$ inches <sup>(b)</sup>
b. Reactor Steam Dome Pressure - Low	$\geq 406.7$ psig	$\geq 402$ psig
c. Drywell Pressure - High	$\leq 2$ psig	$\leq 2$ psig
d. Time Delay-Relay	$14 \leq t \leq 16$ secs	$14 \leq t \leq 16$ secs
e. Bus Power Monitor	NA	NA
<u>2. LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM</u>		
a. Drywell Pressure - High	$\leq 2$ psig	$\leq 2$ psig
b. Reactor Vessel Water Level - Low, Level 3	$\geq + 14.1$ inches <sup>(b)</sup>	$\geq + 13$ inches <sup>(b)</sup>
c. Reactor Vessel Shroud Level	$\geq - 53$ inches <sup>(b)</sup>	$\geq - 53$ inches <sup>(b)</sup>
d. Reactor Steam Dome Pressure - Low		
1. RHR Pump Start and LCPI Valve Actuation	$\geq 406.7$ psig	$\geq 402$ psig
2. Recirculation Pump Discharge Valve Actuation	$\geq 306.7$ psig	$\geq 302$ psig
e. RHR Pump Start - Time Delay Relay	$9 \leq t \leq 11$ seconds	$9 \leq t \leq 11$ seconds
f. Bus Power Monitor	NA	NA

TABLE 3.3.3-2 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
<u>3. HIGH PRESSURE COOLANT INJECTION SYSTEM</u>		
a. Reactor Vessel Water Level - Low, Level 2	$\geq + 104.1$ inches <sup>(b)</sup>	$\geq + 101$ inches <sup>(b)</sup>
b. Drywell Pressure - High	$\leq 2$ psig	$\leq 2$ psig
c. Condensate Storage Tank Level - Low	$\geq 23$ feet 4 inches	$\geq 23$ feet 4 inches
d. Suppression Chamber Water Level - High	$\leq -2$ feet <sup>(c)</sup>	$\leq -2$ feet <sup>(c)</sup>
e. Bus Power Monitor	NA	NA
<u>4. AUTOMATIC DEPRESSURIZATION SYSTEM</u>		
a. ADS Inhibit Switch	NA	NA
b. Reactor Vessel Water Level - Low, Level 3	$\geq + 14.1$ inches <sup>(b)</sup>	$\geq + 13$ inches <sup>(b)</sup>
c. Reactor Vessel Water Level - Low, Level 1	$\geq + 153.2$ inches <sup>(b)</sup>	$\geq + 153$ inches <sup>(b)</sup>
d. ADS Timer	$\leq 83$ seconds	$\leq 108$ seconds
e. Core Spray Pump Discharge Pressure - High	$\geq 112.1$ psig	$\geq 102$ psig
f. RHR (LPCI MODE) Pump Discharge Pressure - High	$\geq 111.1$ psig	$\geq 102$ psig
g. Bus Power Monitor	NA	NA

TABLE 3.3.6.1-2

ATWS RECIRCULATION PUMP TRIP SYSTEM INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>	
1. Reactor Vessel Water Level - Low, Level 2	$\geq + 104.1$ inches <sup>(a)</sup>	$\geq + 101$ inches <sup>(a)</sup>	I
2. Reactor Vessel Pressure - High	$\leq 1137.8$ psig	$\leq 1147$ psig	I

<sup>(a)</sup> Vessel water levels refer to REFERENCE LEVEL ZERO.

TABLE 3.3.7-2REACTOR CORE ISOLATION COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
1. Reactor Vessel Water Level - Low, Level 2	$\geq + 104.1 \text{ inches}^{(a)}$	$\geq + 101 \text{ inches}^{(a)}$
2. Reactor Vessel Water Level - High	$\leq +206.8 \text{ inches}^{(a)}$	$\leq +207 \text{ inches}^{(a)}$
3. Condensate Storage Tank Level - Low	$\geq 23 \text{ feet } 0 \text{ inches}$	$\geq 23 \text{ feet } 0 \text{ inches}$

(a) Vessel water levels refer to REFERENCE LEVEL ZERO.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

ALLOWABLE VALUE CHANGES LICENSE AMENDMENT

CAROLINA POWER AND LIGHT COMPANY

BRUNSWICK STEAM ELECTRIC PLANT UNIT NOS. 1 AND 2

DOCKET NOS. 50-325 AND 50-334

1.0 INTRODUCTION

By letter dated October 28, 1997, Carolina Power and Light Company (CP&L) requested an amendment to revise certain instrumentation allowable values in the Technical Specifications (TS) for the Brunswick Steam Electric Plant Unit Nos. 1 and 2.

The licensee is in the process of converting the current Technical Specifications (CTS) to the improved Standard Technical Specifications format. In support of this effort, the licensee has proposed the revision of certain instrumentation allowable values contained in the CTS. The CTS allowable values are based on uncertainties associated with the trip unit portion of the instrumentation circuitry. The proposed allowable values are based on uncertainties associated with the entire loop of the instrumentation circuitry (trip unit and sensor) and were calculated in accordance with the licensee's setpoint methodology described in Design Guide (DG) VIII.0050, "Instrument Setpoints." The staff has previously reviewed and accepted this setpoint methodology.

2.0 EVALUATION

The following TS changes have been proposed by the licensee:

1. Average Power Range Monitor, Fixed Neutron Flux - High  
(Table 2.2.1-1.2c, page 2-4)  
Change Allowable Value from  $\leq 118\%$  of RATED THERMAL POWER to  $\leq 118.5\%$  of RATED THERMAL POWER.
2. Reactor Vessel Steam Dome Pressure - High  
(Table 2.2.1-1.3, page 2-4)  
Change Allowable Value from  $\leq 1070$  psig to  $\leq 1077$  psig.
3. Primary Containment Isolation, Main Steam Line Flow - High  
(Table 3.3.2-2.1.c.4, page 3/4 3-18) Unit 2 only  
Change Allowable Value from  $\leq 32\%$  of rated flow to  $\leq 33\%$  of rated flow.

4. Secondary Containment Isolation, Reactor Vessel Water Level - Low, Level 2  
(Table 3.3.2-2.2.c, page 3/4)  
Change Allowable Value from  $\geq +103$  inches to  $\geq +101$  inches.
5. Reactor Water Cleanup System Isolation, Reactor Vessel Water Level - Low, Level 2  
(Table 3.3.2-2.3.e, page 3/4 3-19)  
Change Allowable Value from  $\geq +103$  inches to  $\geq +101$  inches.
6. Core Spray System, Reactor Steam Dome Pressure - Low  
(Table 3.3.3-2.1.b, page 3/4 3-39)  
Change Allowable Value from  $\geq 404$  psig to  $\geq 402$  psig
7. Low Pressure Coolant Injection Mode of Residual Heat Removal System, Reactor Steam Dome Pressure - Low (Residual Heat Removal Pump Start and Low Pressure Coolant Injection Valve Actuation)  
(Table 3.3.3-2.2.d.1, page 3/43-39)  
Change Allowable Value from  $\geq 404$  psig to  $\geq 402$  psig.
8. Low Pressure Coolant Injection Mode of Residual Heat Removal System, Reactor Steam Dome Pressure - Low (Recirculation Pump Discharge Valve Actuation)  
(Table 3.3.3-2.2.d.2, page 3/4 3-39)  
Change Allowable Value from  $\geq 304$  psig to  $\geq 302$  psig.
9. High Pressure Coolant Injection System, Reactor Vessel Water Level - Low, Level 2  
(Table 3.3.3-2.3.a, page 3/4)  
Change Allowable Value from  $\geq +103$  inches to  $\geq +101$  inches.
10. Anticipated Transient Without Scram - Recirculation Pump Trip System Instrumentation Setpoints, Reactor Vessel Water Level - Low, Level 2  
(Table 3.3.6.1-2.1, page 3/4 3-90)  
Change Allowable Value from  $\geq +103$  inches to  $\geq +101$  inches.
11. Anticipated Transient Without Scram - Recirculation Pump Trip System Instrumentation Setpoints, Reactor Vessel Pressure - High  
(Table 3.3.6.1-2.2, page 3/4 3-90)  
Change Allowable Value from  $\leq 1143$  psig to  $\leq 1147$  psig.
12. Reactor Core Isolation Cooling System Actuation Instrumentation Setpoints, Reactor Vessel Water Level - Low, Level 2  
(Table 3.3.7-2.1, page 3/4 3-95)  
Change Allowable Value from  $\geq +103$  inches to  $\geq +101$  inches.

The proposed allowable values were calculated by applying calibration-based errors to the trip setpoints, thereby establishing an operability limit associated with the entire loop of each instrumentation function. The proposed allowable value changes are within the analytical limit



for each function and do not affect the existing margins between operating conditions and reactor trip setpoints. Therefore, the proposed allowable value changes are acceptable.

Additionally, based on the above evaluation, the staff concludes that the proposed instrumentation allowable value changes incorporated in the TS are consistent with the licensee's setpoint methodology and, therefore, are acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of North Carolina official was notified of the proposed issuance of the amendments. The State official had no comments.

### 4.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of a facility component located within the restricted area, as defined in 10 CFR Part 20. 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 (62 FR 68304). 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.

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Date: May 28, 1998