

May 31, 2002

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

SUBJECT: BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2 - ISSUANCE OF  
AMENDMENT RE: EXTENDED POWER UPRATE (TAC NOS. MB2700 AND  
MB2701)

Dear Mr. Keenan:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 222 to Facility Operating License No. DPR-71 and Amendment No. 247 to Facility Operating License No. DPR-62 for Brunswick Steam Electric Plant (BSEP), Units 1 and 2. The amendments are in response to your application dated August 9, 2001, as supplemented October 17, November 1, 7, 28, and 30, December 4, 10, 17 (2 letters), and 20, 2001, January 24, February 1, 4, 13, 14, 21 (2 letters), and 25 (3 letters), March 4, 5, 7, 12, 14 (2 letters), 20, 22, and 25, and April 26 and 29, 2002. The supplemental letters contained clarifying information only, and did not change the scope of the initial application.

The amendments revise the Facility Operating Licenses and Technical Specifications (TS) to allow an increase in the maximum power level at each BSEP unit from 2558 megawatts thermal (MWt) to 2923 MWt, representing a power increase of approximately 15 percent. The amendments include supporting TS changes, the revision to License Conditions 2.C.(1) and 2.C.(2), and the addition of two additional License Conditions to Appendix B, "Additional Conditions," that will require the modification of the Standby Liquid Control system to implement this increase in licensed power level.

J. Keenan

- 2 -

A copy of the related Safety Evaluation is also enclosed. The Notice of Issuance has been forwarded to the Office of the Federal Register for publication.

Sincerely,

*/RA/*

Brenda L. Mozafari, Sr. Project Manager, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-325  
and 50-324

Enclosures:

1. Amendment No. 222 to  
License No. DPR-71
2. Amendment No. 247 to  
License No. DPR-62
3. Non-proprietary Safety Evaluation
4. Proprietary Safety Evaluation
5. Notice of Issuance

cc w/enclosures 1, 2, 3, and 5:  
See next page

A copy of the related Safety Evaluation is also enclosed. The Notice of Issuance has been forwarded to the Office of the Federal Register for publication.

Sincerely,

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Brenda L. Mozafari, Sr. Project Manager, Section 2  
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 and 50-324

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5. Notice of Issuance

cc w/enclosures 1, 2, 3, and 5:  
 See next page

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cc: Brunswick Service List

**Accession Numbers:**

ML021430554 (Package)

ML021430551 (Cover letter & amendment pages)

ML021440346 (Non-proprietary Safety Evaluation)

ML021430515 (Proprietary Safety Evaluation)

ML021490134 (FR Notice)

OFFICE	PD-II/PM	PD-II/LA	OGC	PDII-2/(A)SC	PD:PD2	D:DLPM	ADP	D:NRR
NAME	BMozafari	EDunnington	JHeck	TKoshy	HBerkow	JZwolinski	BSheron	SCollins
DATE*	05/10/02 05/29/02	05/10/02 05/29/02	05/22/02	05/23/02	05/23/02	05/24/02	05/28/02	05/28/02

*The following technical branches provided safety evaluation input by memos dated\**

SPLB	EEIB	EEIB/I&C	EMCB	SRXB/BWR	SPLB/EP	EMEB	IOLB	SPSB	IEHB/DIPM
RHagar	CHolden	EMarinos	MMitchell	RCaruso	EWeiss	KGibson	DTrimble	RBarrett	DThatcher
02/28/02	01/15/02	12/10/01	03/07/02	03/20/02	03/12/02	03/06/02	12/10/01	03/13/02	03/01/02

Mr. J. S. Keenan  
Carolina Power & Light Company

Brunswick Steam Electric Plant  
Units 1 and 2

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Southport, NC 28461



CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-325

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 222  
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 August 9, 2001, as supplemented October 17, November 1, 7, 28, and 30, December 4, 10, 17 (2 letters), and 20, 2001, January 24, February 1, 4, 13, 14, 21 (2 letters), and 25 (3 letters), March 4, 5, 7, 12, 14 (2 letters), 20, 22, and 25, and April 26 and 29, 2002, 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. 222, are hereby incorporated in the license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications.

In addition, paragraph 3 of Facility Operating License No. DPR-71 is hereby amended to read as follows:

3. Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 222, are hereby incorporated into this license. Carolina Power & Light Company shall operate the facility in accordance with the Additional Conditions.

3. Also, the license is amended by replacing Paragraph 2.C.(1) on page 3 of Facility Operating License No. DPR-71 with the following:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2923 megawatts thermal.

4. Finally, Appendix B, "Additional Conditions," is amended to include the license conditions for this extended power uprate.
5. This license amendment is effective as of the date of its issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Samuel J. Collins, Director  
Office of Nuclear Reactor Regulation

Attachments:

1. Page 3 of License DPR-71
2. Changes to the Technical Specifications
3. Appendix B

Date of Issuance: May 31, 2002

- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess and use in amounts as required any byproduct, source and special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
- (5) Pursuant to the Act and 10 CFR Parts 30 and 70 to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of Brunswick Steam Electric Plant, Unit Nos. 1 and 2, and H. B. Robinson Steam Electric Plant, Unit No. 2.
- (6) Carolina Power and Light Company shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility and as approved in the Safety Evaluation Report, dated November 22, 1977, as supplemented April 1979, June 11, 1980, December 30, 1986, December 6, 1989, July 28, 1993, and February 10, 1994, respectively, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2923 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 222, are hereby incorporated in the license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications.

For Surveillance Requirements (SRs) that are new in Amendment 203 to Facility Operating License DPR-71, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 203. For SRs that existed prior to Amendment 203, including SRs with modified acceptance criteria and SRs whose frequency of performance is being extended, the first performance is due at the end of the first surveillance interval that begins on the date the Surveillance was last performed prior to implementation of Amendment 203.



ATTACHMENT TO LICENSE AMENDMENT NO. 222

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

<u>Remove Pages</u>	<u>Insert Pages</u>
1.1-5	1.1-5
2.0-1	2.0-1
3.1-9	3.1-9
3.1-18	3.1-18
3.2-1	3.2-1
3.2-2	3.2-2
3.3-2	3.3-2
3.3-4	3.3-4
3.3-7	3.3-7
3.3-9	3.3-9
3.3-11	3.3-11
3.3-21	3.3-21
3.3-22	3.3-22
3.3-23	3.3-23
3.3-24	3.3-24
3.7-20	3.7-20

## APPENDIX B

### Additional Conditions

<u>Amendment Number</u>	<u>Additional Conditions</u>	<u>Implementation Date</u>
203	The licensee is authorized to relocate certain requirements included in Appendix A and the former Appendix B to licensee-controlled documents. Implementation of this amendment shall include the relocation of these requirements to the appropriate documents, as described in the licensee's letters dated November 1, 1996, October 13, 1997, February 26, 1998, April 24, 1998, and May 22, 1998, evaluated in the NRC staff's Safety Evaluation enclosed with this amendment.	This amendment is effective immediately and shall be implemented within 90 days of the date of this amendment.
222	The licensee shall modify the Standby Liquid Control (SLC) system by increasing neutron absorber concentration.	Prior to startup following the Unit 1 Cycle 15 Refueling Outage
222	The licensee shall submit a license amendment request, revising Technical Specification Section 3.1.7, "Standby Liquid Control (SLC) System," to ensure the SLC system: (1) remains capable of bringing the reactor to a subcritical condition with the reactor in the most reactive, xenon free state without taking credit for control rod movement, and (2) continues to meet the requirements of 10 CFR 50.62.	The Unit 1 license amendment request shall be submitted to the NRC by August 29, 2003.

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-324

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 247  
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 August 9, 2001, as supplemented October 17, November 1, 7, 28, and 30, December 4, 10, 17 (2 letters), and 20, 2001, January 24, February 1, 4, 13, 14, 21 (2 letters), and 25 (3 letters), March 4, 5, 7, 12, 14 (2 letters), 20, 22, and 25, and April 26 and 29, 2002, 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. 247, are hereby incorporated in the license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications.

In addition, paragraph 3 of Facility Operating License No. DPR-62 is hereby amended to read as follows:

3. Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 247, are hereby incorporated into this license. Carolina Power & Light Company shall operate the facility in accordance with the Additional Conditions.

3. Also, the license is amended by replacing Paragraph 2.C.(1) on page 3 of Facility Operating License No. DPR-62 with the following:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2923 megawatts thermal.

4. Finally, Appendix B, "Additional Conditions," is amended to include the license conditions for this extended power uprate.
5. This license amendment is effective as of the date of its issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Samuel J. Collins, Director  
Office of Nuclear Reactor Regulation

Attachments:

1. Page 3 of License DPR-62
2. Changes to the Technical Specifications
3. Appendix B

Date of Issuance: May 31, 2002

- (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
- (3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source, and special nuclear materials without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
- (5) Pursuant to the Act and 10 CFR Part 30 and 70 to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of Brunswick Steam Electric Plant, Unit Nos. 1 and 2, and H. B. Robinson Steam Electric Plant, Unit No. 2.
- (6) Carolina Power and Light Company shall implement and maintain in effect all provision of the approved fire protection program as described in the Final Safety Analysis Report for the facility and as approved in the Safety Evaluation Report dated November 22, 1977, as supplemented April 1979, June 11, 1980, December 30, 1986, December 6, 1989, July 28, 1993 and February 10, 1994 respectively, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

- (1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2923 megawatts (thermal).

ATTACHMENT TO LICENSE AMENDMENT NO. 247

FACILITY OPERATING LICENSE NO. DPR-62

DOCKET NO. 50-324

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages

1.1-5  
2.0-1  
3.1-9  
3.1-18  
3.2-1  
3.2-2  
3.3-2  
3.3-4  
3.3-7  
3.3-9  
3.3-11  
3.3-21  
3.3-22  
3.3-23  
3.3-24  
3.7-20

Insert Pages

1.1-5  
2.0-1  
3.1-9  
3.1-18  
3.2-1  
3.2-2  
3.3-2  
3.3-4  
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3.3-11  
3.3-21  
3.3-22  
3.3-23  
3.3-24  
3.7-20

## APPENDIX B

### Additional Conditions

<u>Amendment Number</u>	<u>Additional Conditions</u>	<u>Implementation Date</u>
233	The licensee is authorized to relocate certain requirements included in Appendix A and the former Appendix B to licensee-controlled documents. Implementation of this amendment shall include the relocation of these requirements to the appropriate documents, as described in the licensee's letters dated November 1, 1996, October 13, 1997, February 26, 1998, April 24, 1998, and May 22, 1998, evaluated in the NRC staff's Safety Evaluation enclosed with this amendment.	This amendment is effective immediately and shall be implemented within 90 days of the date of this amendment.
233	The End-Of-Cycle Recirculation Pump Trip system instrumentation shall be maintained inoperable (i.e. manually bypassed) during Mode 1, when thermal power is greater than or equal to 30% rated thermal power. Implementation of this amendment shall include this condition, as described in the licensee's letter dated March 13, 1998, evaluated in the NRC staff's Safety Evaluation enclosed with this amendment.	This amendment is effective immediately and shall be implemented within 90 days of the date of this amendment.
246	The licensee shall, consistent with the applicable provisions of the BWR Owners' Group Report NEDC-31858P, Revision 2, as approved in the NRC staff's Safety Evaluation dated March 3, 1999, complete the seismic verification walkdowns and modifications necessary to ensure seismic ruggedness of the alternate leakage treatment (ALT) piping and appendages.	Prior to startup following the Unit 2 Cycle 16 Refueling Outage.
246	The licensee shall, consistent with the licensee's letter dated September 27, 2001 (i.e., Serial: BSEP 01-0112), include ALT path motor-operated valves MS-F038A, MS-F038B, MS-F038C, MS-F038D, and MVD-F021 in an augmented inservice testing program.	Prior to startup following the Unit 2 Cycle 16 Refueling Outage.
246	The licensee shall, consistent with the licensee's letter dated September 27, 2001 (i.e., Serial: BSEP 01-0112), include ALT path check valves MVD-V5008 and MVD-V5009 in the facility check valve program.	Prior to startup following the Unit 2 Cycle 16 Refueling Outage.

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|-----|--|--|
| 247 | The licensee shall modify the Standby Liquid Control (SLC) system by increasing neutron absorber concentration.  | Prior to startup following the Unit 2 Cycle 16 Refueling Outage                        |
| 247 | The licensee shall submit a license amendment request, revising Technical Specification Section 3.1.7, "Standby Liquid Control (SLC) System," to ensure the SLC system: (1) remains capable of bringing the reactor to a subcritical condition with the reactor in the most reactive, xenon free state without taking credit for control rod movement, and (2) continues to meet the requirements of 10 CFR 50.62. | The Unit 2 license amendment request shall be submitted to the NRC by August 30, 2002. |