



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

May 7, 2009

Mr. Benjamin Waldrep, 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 AMENDMENTS REGARDING ELIMINATION OF WORK HOUR CONTROLS TO SUPPORT COMPLIANCE WITH REVISED PART 26 OF TITLE 10 OF THE *CODE OF FEDERAL REGULATIONS* (TAC NOS. MD9812 AND MD9813)

Dear Mr. Waldrep:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 253 to Renewed Facility Operating License No. DPR-71, and Amendment No. 281 to Renewed Facility Operating License No. DPR-62, Brunswick Steam Electric Plant (BSEP), Units 1 and 2, respectively. The amendments are in response to your application dated October 6, 2008 (Agencywide Documents Access and Management System Accession No. ML082830137). The amendments remove work hour controls and/or references to the NRC Generic Letter 82-12 from the administrative control sections of the technical specifications.

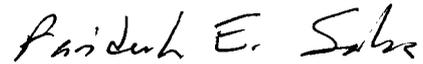
On April 17, 2007, the NRC approved a final rule that amended Part 26 of Title 10 of the *Code of Federal Regulations* (10 CFR Part 26), and, among other changes, established requirements for managing worker fatigue at operating nuclear power plants. Subpart I, "Managing Fatigue," of 10 CFR Part 26 specifically addresses managing worker fatigue by designating individual break requirements, work hour limits, and annual reporting requirements. Subpart I was published in the *Federal Register* on March 31, 2008 (73 FR 16966), with a required implementation period of 18 months. Compliance is, therefore, required by October 1, 2009. In order to support compliance with 10 CFR Part 26, Subpart I, the licensee requested to eliminate these work hour controls from Technical Specification 5.2.2.e at the BSEP, Units 1 and 2.

B. Waldrep

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A copy of the related safety evaluation is also enclosed. A notice of issuance will be included in the NRC's biweekly *Federal Register* notice.

Sincerely,



Farideh E. Saba, Senior Project Manager  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-325 and 50-324

Enclosures:

1. Amendment No. 253 to  
Renewed License No. DPR-71
2. Amendment No. 281 to  
Renewed License No. DPR-62
3. Safety Evaluation

cc w/enclosures: Distribution via ListServ



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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-325

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 253  
Renewed 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 6, 2008, 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 Renewed 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. 253 , 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 no later than October 1, 2009.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas H. Boyce, Chief  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Operating License  
and Technical Specifications

Date of Issuance: May 7, 2009

ATTACHMENT TO LICENSE AMENDMENT NO. 253  
RENEWED FACILITY OPERATING LICENSE NO. DPR-71  
DOCKET NO. 50-325

Replace Page 4 of Renewed Operating License DPR-71 with the attached Page 4.

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  
5.0-3

Insert Pages  
5.0-3

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 253 , 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 Renewed 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.

- (a) Effective June 30, 1982, the surveillance requirements listed below need not be completed until July 15, 1982. Upon accomplishment of the surveillances, the provisions of Technical Specification 4.0.2 shall apply.

Specification 4.3.3.1, Table 4.3.3-1, Items 5.a and 5.b

- (b) Effective July 1, 1982, through July 8, 1982, Action statement "a" of Technical Specification 3.8.1.1 shall read as follows:

ACTION:

- a. With either one offsite circuit or one diesel generator of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.A. sources by performing Surveillance Requirements 4.8.1.1.1.a and 4.8.1.1.2.a.4 within two hours and at least once per 12 hours thereafter; restore at least two offsite circuits and four diesel generators to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

- (3) Deleted by Amendment No. 206.

- D. The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans, including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Physical Security Plan, Revision 2," and "Safeguards Contingency Plan, Revision 2," submitted by letter dated May 17, 2006, and "Guard Training and Qualification Plan, Revision 0," submitted by letter dated September 30, 2004.

5.2 Organization

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5.2.2 Facility Staff (continued)

- b. At least one licensed Reactor Operator (RO) shall be present in the control room when fuel is in the reactor. In addition, when either unit is in MODE 1, 2, or 3, at least one licensed Senior Reactor Operator (SRO) shall be present in the control room. With one unit in MODE 1, 2, or 3 and the other unit defueled, the minimum shift crew shall include a total of two SROs and two ROs.
  - c. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and Specifications 5.2.2.a and 5.2.2.g for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.
  - d. An individual qualified in radiation protection procedures shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
  - e. Deleted
  - f. The operations manager or assistant operations manager shall hold an SRO license.
  - g. The shift technical advisor shall serve in an advisory capacity to the shift superintendent on matters pertaining to the engineering aspects assuring safe operation of the unit when either unit is in MODE 1, 2, or 3.
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CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-324

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 281  
Renewed 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 6, 2008, 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 Renewed 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. 281, 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 no later than October 1, 2009.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas H. Boyce, Chief  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Operating License  
and Technical Specifications

Date of Issuance: May 7, 2009

ATTACHMENT TO LICENSE AMENDMENT NO. 281

FACILITY OPERATING LICENSE NO. DPR-62

DOCKET NO. 50-324

Replace Page 3 of Renewed Operating License DPR-62 with the attached Page 3.

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

5.0-3

Insert Pages

5.0-3

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 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 & 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 renewed 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).

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 281, are hereby incorporated in the license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications.

5.2 Organization

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5.2.2 Facility Staff (continued)

- b. At least one licensed Reactor Operator (RO) shall be present in the control room when fuel is in the reactor. In addition, when either unit is in MODE 1, 2, or 3, at least one licensed Senior Reactor Operator (SRO) shall be present in the control room. With one unit in MODE 1, 2, or 3 and the other unit defueled, the minimum shift crew shall include a total of two SROs and two ROs.
  - c. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and Specifications 5.2.2.a and 5.2.2.g for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.
  - d. An individual qualified in radiation protection procedures shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
  - e. Deleted
  - f. The operations manager or assistant operations manager shall hold an SRO license.
  - g. The shift technical advisor shall serve in an advisory capacity to the shift superintendent on matters pertaining to the engineering aspects assuring safe operation of the unit when either unit is in MODE 1, 2, or 3.
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UNITED STATES  
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 253 AND 281

TO RENEWED FACILITY OPERATING LICENSES NOS. DPR-71 AND DPR-62

CAROLINA POWER & LIGHT COMPANY

BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2

DOCKET NOS. 50-325 AND 50-324

1.0 INTRODUCTION

By letter dated October 6, 2008, (Agencywide Document and Management System (ADAMS) Accession No. ML082830137), Carolina Power & Light Company (the licensee) requested changes to Renewed Operating Licenses DPR-71 and DPR-62 for the Brunswick Steam Electric Plant (BSEP), Units 1 and 2, respectively. The amendments remove work hour controls and/or references to the Nuclear Regulatory Commission (NRC) Generic Letter (GL) 82-12 "Nuclear Power Plant Staff Working Hours," from the administrative control sections of the technical specifications (TSs).

On April 17, 2007, the NRC approved a final rule that amended Part 26 of Title 10 of the *Code of Federal Regulations* (10 CFR Part 26) and, among other changes, established requirements for managing worker fatigue at operating nuclear power plants. Subpart I, "Managing Fatigue," of 10 CFR Part 26 specifically addresses managing worker fatigue by designating individual break requirements, work hour limits, and annual reporting requirements. Subpart I was published in the *Federal Register* on March 31, 2008 (73 FR 16966), with a required implementation period of 18 months. Compliance is, therefore, required by October 1, 2009. In order to support compliance with 10 CFR Part 26, Subpart I, the licensee requested to eliminate these work hour controls from TS 5.2.2.e at BSEP, Units 1 and 2.

The NRC staff's proposed no significant hazards consideration determination as published in the *Federal Register* on January 27, 2009 (74 FR 4767).

2.0 REGULATORY EVALUATION

On June 15, 1982, the NRC staff issued GL 82-12, which was a revision of past guidance and discussions regarding the limitation of work hours to mitigate worker fatigue and the impact of fitness-for-duty on safety. GL 82-12 established overtime guidance for work hours beyond a normal 8-hour day, 40-hour week. Issued prior to GL 82-12, GL 82-02, "Nuclear Power Plant Staff Working Hours," requested that all licensees revise the administrative section of their TSs to require that administrative procedures follow policy guidelines. GL 82-12 invoked this request. References to GL 82-12 were incorporated into the BSEP TSs in accordance with 10 CFR 50.36, "Technical Specifications."

On April 17, 2007, the NRC approved a final rule amending 10 CFR Part 26 in the Commission Paper, SECY-06-0244 (ADAMS Accession No. ML071070362), "Final Rulemaking - 10 CFR Part 26 – Fitness-for-Duty Programs." The regulations in 10 CFR Part 26, Subpart I, specifically address managing worker fatigue by designating individual break requirements, work hour limits, and annual reporting requirements. The rule was published in the *Federal Register* on March 31, 2008 (73 FR 16966), with required implementation no later than October 1, 2009.

### 3.0 TECHNICAL EVALUATION

The proposed changes remove references to and limits provided by GL 82-12 from the administrative controls sections of the BSEP, Units 1 and 2 TSs. The requirements established by 10 CFR Part 26, Subpart I, supersede GL 82-12 guidance. Subpart I of 10 CFR Part 26 strengthens requirements for both work hour controls and fatigue management. Requirements in the rule include work hour limitations for rolling 24-hour, 48-hour, and 7-day periods, which were imposed by GL 82-12. The rule also includes a required minimum break between work periods and varying required minimum days off. Additionally, 10 CFR Part 26, Subpart I, restricts the use of waivers used to deviate from requirements to situations where noncompliance with the regulations is necessary to mitigate or prevent a condition adverse to safety or necessary to maintain the security of the facility. The scope of the rule's requirements includes operating and maintenance personnel, as well as those directing operating and maintenance personnel, performing work on risk significant equipment, health physics and chemistry personnel who are a part of the on-site minimum shift complement, the fire brigade leader or advisor, and security personnel.

The proposed changes remove references to and limits provided by GL 82-12 from the administrative controls section of the TSs to support compliance with 10 CFR Part 26, Subpart I. Upon implementation, federal regulations will govern the requirements associated with work hour controls and fatigue management at the BSEP, Units 1 and 2. The work hour controls and fatigue management requirements were incorporated into the *Code of Federal Regulations*; therefore, it is unnecessary to have work hour control requirements in the administrative control section of the TSs. As required by the rule (73 FR 16966), licensees must implement the requirements of 10 CFR Part 26, Subpart I, no later than October 1, 2009.

The licensee committed to implement the new requirements of 10 CFR Part 26, Subpart I, concurrent with the deletion of the TSs references to GL 82-12. The commitment ensures work hour controls will be in effect continuously, either through the current TSs requirements or through the requirements of 10 CFR Part 26, Subpart I. Due to this commitment and since 10 CFR Part 26, Subpart I, supersedes GL 82-12 guidance, the staff finds the removal of references to GL 82-12 guidance from the TSs acceptable.

### 4.0 STATE CONSULTATION

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

### 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to 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 NRC has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (74 FR 4767). 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.

## 6.0 CONCLUSION

The NRC 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 NRC'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: Kamishan Martin

Date: May 7, 2009

B. Waldrep

- 2 -

A copy of the related safety evaluation is also enclosed. A notice of issuance will be included in the NRC's biweekly *Federal Register* notice.

Sincerely,

**/RA/**

Farideh E. Saba, Senior Project Manager  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-325 and 50-324

Enclosures:

1. Amendment No. 253 to  
Renewed License No. DPR-71
2. Amendment No. 281 to  
Renewed License No. DPR-62
3. Safety Evaluation

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NRR-058

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DATE	04/21/09	04/14/09	04/03/09	05/07/09	05/01/09	05/07/09

\* by memo

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