January 11, 19

Docket Nos. 50-325
and 50-324

Mr. R. A. Anderson, Vice President
Carolina Power & Light Company
Brunswick Steam Electric Plant
Post Office Box 10429
Southport, North Carolina 28461

Dear Mr. Anderson:

SUBJECT: ISSUANCE OF AMENDMENT NO. 167 TO FACILITY OPERATING LICENSE NO. DPR-71 AND AMENDMENT NO. 198 TO FACILITY OPERATING LICENSE NO. DPR-62 REGARDING CONTAINMENT INTEGRATED LEAK RATE TEST - BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2 (TAC NOS. M88044 AND M88045)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 167 to Facility Operating License No. DPR-71 and Amendment No. 198 to Facility Operating License No. DPR-62 for Brunswick Steam Electric Plant, Units 1 and 2. The amendments change the Technical Specifications (TS) in response to your submittal dated October 19, 1993.

The amendments change the TS to add a footnote to TS 4.6.1.2.b that allows a one-time exemption from the accelerated containment integrated leak rate test requirements to return the containment integrated leak rate test frequency for both units to a normal Type A test interval. The staff has determined that the changes are acceptable. A one-time exemption to Appendix J of 10 CFR Part 50 was issued on January 11, 1994.

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

Sincerely,

ORIGINAL SIGNED BY:

Patrick D. Milano, Senior Project Manager
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 167 to License No. DPR-71
2. Amendment No. 198 to License No. DPR-62
3. Safety Evaluation

cc w/enclosures: See next page

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

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Patrick D. Milano, Senior Project Manager
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Office of Nuclear Reactor Regulation

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cc w/enclosures: See next page

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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. 167
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 19, 1993, 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. 167, 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 of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

S. Singh Bajwa, Acting Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 11, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 167

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	Insert Pages
3/4 6-3	3/4 6-3

LIMITING CONDITION FOR OPERATION (Continued)

ACTION (Continued)

c. The leakage rate to less than or equal to 11.5 scf per hour for any one main steam line isolation valve,

prior to increasing reactor coolant system temperature above 212°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The primary containment leakage rates shall be demonstrated at the following schedule and shall be determined in conformance with the criteria specified in Appendix J of 10CFR50:

a. Three Type A Overall Integrated Containment Leakage Rate tests shall be conducted at 40 ± 10 month intervals during shutdown at P_a, 49 psig, or P_t, 25 psig, during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection.

b. If any periodic Type A test fails to meet either 0.75 L_a or 0.75 L_t, the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet 0.75 L_a or 0.75 L_t, a Type A test shall be performed at each plant shutdown for refueling or every 18 months, whichever occurs first, until two consecutive Type A tests meet 0.75 L_a or 0.75 L_t, at which time the above test schedule may be resumed.*

c. The accuracy of each Type A test shall be verified by a supplemental test which:

1. Confirms the accuracy of the test by verifying that the difference between the supplemental data and the Type A test data is within 0.25 L_a or 0.25 L_t.

2. Has duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test.

3. Requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be equivalent to at least 25 percent of the total measured leakage at P_a, 49 psig or P_t, 25 psig.

* A one time exemption from the accelerated testing requirements of Specification 4.6.1.2.b has been granted. The next Unit 1 Type A test will be performed during the Reload 9 outage after which two consecutive Type A test failures are required to resume the accelerated test schedule.

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. 198
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 19, 1993, 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. 198 , 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 of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

S. Singh Bajwa, Acting Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 11, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 198

FACILITY OPERATING LICENSE NO. DPR-62

DOCKET NO. 50-324

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

Remove Pages	Insert Pages
3/4 6-3	3/4 6-3

LIMITING CONDITION FOR OPERATION (Continued)

ACTION (Continued)

c. The leakage rate to less than or equal to 11.5 scf per hour for any one main steam line isolation valve,

prior to increasing reactor coolant system temperature above 212°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The primary containment leakage rates shall be demonstrated at the following schedule and shall be determined in conformance with the criteria specified in Appendix J of 10CFR50:

a. Three Type A Overall Integrated Containment Leakage Rate tests shall be conducted at 40 ± 10 month intervals during shutdown at P_a, 49 psig, or P_t, 25 psig, during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection.

b. If any periodic Type A test fails to meet either 0.75 L_a or 0.75 L_t, the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet 0.75 L_a or 0.75 L_t, a Type A test shall be performed at each plant shutdown for refueling or every 18 months, whichever occurs first, until two consecutive Type A tests meet 0.75 L_a or 0.75 L_t, at which time the above test schedule may be resumed.*

c. The accuracy of each Type A test shall be verified by a supplemental test which:

1. Confirms the accuracy of the test by verifying that the difference between the supplemental data and the Type A test data is within 0.25 L_a or 0.25 L_t.

2. Has duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test.

3. Requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be equivalent to at least 25 percent of the total measured leakage at P_a, 49 psig or P_t, 25 psig.

* A one time exemption from the accelerated testing requirements of Specification 4.6.1.2.b has been granted. The next Unit 2 Type A test will be performed during the Reload 12 outage after which two consecutive Type A test failures are required to resume the accelerated test schedule.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 167 TO FACILITY OPERATING LICENSE NO. DPR-71

AND AMENDMENT NO. 198 TO FACILITY OPERATING LICENSE NO. 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 19, 1993, Carolina Power & Light Company (the licensee) submitted a request for changes to the Brunswick Steam Electric Plant, Units 1 and 2 (BSEP), Technical Specifications (TS). The requested changes to the TS add a footnote to Surveillance Requirement 4.6.1.2.b to allow a one-time exemption from the accelerated Type A containment integrated leak rate test (CILRT) requirements. Since the two previous Type A tests were classified as failures for each BSEP unit, the licensee is required to institute an accelerated Type A test frequency in accordance with TS Surveillance Requirement 4.6.1.2.b. The change would allow both BSEP units to return to a normal testing frequency such that the next Unit 1 Type A test would then be performed during the Reload 9 outage, scheduled for March 1995, and the next Unit 2 test during the Reload 12 outage, scheduled for March 1997.

2.0 EVALUATION

In its application, the licensee also requested a one-time exemption from the requirements of 10 CFR Part 50, Appendix J, Section III.A.6.(b), that would require accelerated Type A testing if two consecutive periodic Type A tests fail to meet the applicable acceptance criteria in Section III.A.5(b). The failure to meet this acceptance criteria requires the performance of a Type A test at each plant shutdown for refueling or approximately every 18 months, whichever occurs first, until two consecutive Type A tests meet the acceptance criteria, after which time the normal retest schedule may be resumed. The licensee failed to meet the total measured leakage rate acceptance criteria during the last two Type A tests performed on BSEP Unit 1, in 1987 and 1991 respectively, and during the last two tests on BSEP Unit 2, in 1991 and 1992, respectively. The licensee's bases for requesting the exemption are that the accelerated test schedule results in an extended outage and increases the outage cost without a significant safety benefit and that Type A testing causes drywell structural stress that would be minimized by a return to a normal test frequency. The exemption request will be covered in a separate evaluation issued by the staff.

In its letter dated October 19, 1993, the licensee stated that each unit is currently in an accelerated testing condition due to as-found testing failures that were within L_a leakage limits, except for the 1987 Unit 1 test, but exceeded the current 0.75 L_a leakage limit of Section III.A.5.(b)(2) of Appendix J to 10 CFR Part 50. The licensee based its request on the fact that the as-left limit of 0.75 L_a was specified in Appendix J to provide a margin for possible deterioration of the containment leak-tightness during the interval between Type A tests. The licensee states that this margin for deterioration is no longer needed when the as-found Type A test is performed. The licensee believes that it should be technically acceptable to use L_a as the as-found Type A test acceptance criterion.

The as-found Type A condition is represented by the leakage rate calculated by adding the differences between the as-found and as-left measured local leakage rates from each Type B and Type C test to the leakage rate measured in the Type A test. These Type B and Type C tests are usually conducted prior to conducting the Type A test. In the event that potentially excessive leakage paths are identified that would interfere with the satisfactory completion of a periodic Type A test and such paths are isolated during the test, the Type B or Type C as-found leakage rates measured on the isolated penetrations after the completion of the Type A test are added in to the Type A as-found leakage rate total. The as-left Type A condition is represented by the periodic Type A leakage rate after any required repairs and/or adjustments are made.

The staff has reviewed the history of the Type A tests conducted at BSEP and found that the last two Type A as-found test results have been failures as noted below:

Unit 1 Type A Test History

Date of Test	As-Found Leak Rate (% wt. per day)	As-Left Leak Rate (% wt. per day)	0.75 L_a Limit (% wt. per day)
1987	Greater than L_a	.2150	0.375
1991	.4956	.3408	0.375

Unit 2 Type A Test History

Date of Test	As-Found Leak Rate (% wt. per day)	As-Left Leak Rate (% wt. per day)	0.75 L_a Limit (% wt. per day)
1991	.4042	.3552	0.375
1992	.4420	.3511	0.375

The staff noted that the last two test results for each unit have exceeded the acceptance criterion of 0.75 L_a that is required by Appendix J. Except for the 1987 test on Unit 1, the test results did not exceed the maximum allowable rate of 1.0 L_a. The licensee indicated that the 1987 Unit 1 failure was caused by a containment penetration failure that was identified during the local leak rate testing. The licensee also stated that the primary reason for failing the as-found limits is considered to be the leakage savings additions from Type C testing of valves and the Type B testing of penetrations, where

leakage rates of repaired or replaced components are added into the integrated Type A test results.

The licensee stated that the major contributors to the 1987 Unit 1 test failure were from (1) penetration X9A, Feedwater Loop A Injection, and (2) penetration X54E, Containment Monitor, CAC-AT-1262, Discharge. The licensee further stated that corrective actions were completed to repair several valves associated with these penetrations and that, if the leakage from these penetrations were not considered, the as-found leakage savings would have been 0.049 % wt. per day. For the 1991 Unit 1 Type A test, the majors contributors were stated to be (1) penetration X9B, Feedwater Loop B Injection, (2) penetration X14, Reactor Water Cleanup (RWCU) Suction Line, and (3) penetration X10, Reactor Core Isolation Cooling Turbine Steam Supply Line. These penetrations were repaired by the repair or replacement of affected valves.

The licensee stated that the major contributors to the 1991 Unit 2 test failure were from (1) penetration X220, Torus Purge to Standby Gas, and (2) penetration X8, Main Steam Line Drain. The major contributors to the 1992 Unit 2 failure were from (1) penetration X14, RWCU Suction, and (2) penetration X12, Residual Heat removal Shutdown Cooling Suction. The licensee conducted repairs to several valves to correct the leakage through each of these penetrations.

The NRC staff has reviewed the licensee's request and finds that there is adequate assurance that there will not be any significant undetected degradation in the primary containment leakage during the next Type A test interval in that the primary contributors to potentially excessive leakage paths will be measured during the required Type B and Type C tests. These latter tests will be conducted at least during each 18-month refueling outage, but on no case at intervals greater than 2 years (Sections III.D.2 and III.D.3 of Appendix J to 10 CFR Part 50). Any potentially excessive leakage paths will continue to be repaired and/or adjusted prior to restart and at intervals of 18 months, thereby continuing to ensure the integrity of the containment. Additionally, the allowable leak rate on Type A tests contains a 25 percent safety margin between the leak rate acceptance criterion and the leak rate assumed for the containment during a loss-of-coolant accident. Based on these considerations, the staff issued a one-time exemption to Section III.A.6(b) of Appendix J to 10 CFR Part 50 in a letter to the licensee dated and concluded that the actions will ensure compliance with the maximum permissible containment leakage rate specified in the BSEP Technical Specifications. Therefore, the staff finds that the proposed TS changes 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 amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The NRC staff has determined that the amendment involves 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 amendment involves no significant hazards consideration, and there has been no public comment on such finding (58 FR 59745). Accordingly, the amendment meets 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 amendment.

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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: P. D. Milano

Date: January 11, 1994

DISTRIBUTION:

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NRC/Local PDRs
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