

January 11, 1984

Docket Nos. 50-325/324

Mr. E. E. Utley
Executive Vice President
Carolina Power & Light Company
Post Office Box 1551
Raleigh, North Carolina 27602

Dear Mr. Utley:

The Commission has issued the enclosed Amendment Nos. 65 and 91 to Facility Operating License No. DPR-71 and DPR-62 for the Brunswick Steam Electric Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications in response to your submittal of October 3, 1983.

The amendments change the Technical Specifications to provide limited flexibility in scheduling containment leak testing surveillance consistent with planned outages. They do not result in a long-term extension of the surveillance schedule because of the requirements of Specification 4.0.2.b (the 3.25 times the surveillance interval rule).

A copy of the related Safety Evaluation is also enclosed.

Sincerely,

Original signed by/

Marshall Grotenhuis, Project Manager
Operating Reactors Branch #2
Division of Licensing

Enclosures:

1. Amendment No. 65 to License No. DPR-71
2. Amendment No. 91 to License No. DPR-62
3. Safety Evaluation

cc w/enclosures:
See next page

DISTRIBUTION:	Docket File	NRC PDR	LPDR	ORB#2 Reading	DEisenhut
SNorris	MGrotenhuis	OELD	SECY	LJHarmon	EJordan
JTaylor	TBarnhart-8	WJones	DBrinkman	ACRS-10	OPA-CMiles
RDiggs	NSIC	Gray	Extra - 5		

DL:ORB#2
SNorris
12/9/83

DL:ORB#2
MGrotenhuis
12/9/83

DL:ORB#2
SMacKay
12/1/83

DL:ORB#2
DVassallo
12/12/83

OELD
12/2/83

DL:ORB#2
GLainas
12/10/83

DL:SSPB
D Brinkman
12/12/83

(Mainly OELD change)

8401250446 840111
PDR ADOCK 05000324
P PDR

Mr. E. E. Utley
Carolina Power & Light Company
Brunswick Steam Electric Plant, Units 1 and 2

cc:

Richard E. Jones, Esquire
Carolina Power & Light Company
336 Fayetteville Street
Raleigh, North Carolina 27602

George F. Trowbridge, Esquire
Shaw, Pittman, Potts and Trowbridge
1800 M Street, N. W.
Washington, D. C. 20036

Mr. Charles R. Dietz
Plant Manager
Post Office Box 458
Southport, North Carolina 28461

Mr. Franky Thomas, Chairman
Board of Commissioners
Post Office Box 249
Bolivia, North Carolina 28422

Mrs. Chrys Baggett
State Clearinghouse
Budget and Management
116 West Jones Street
Raleigh, North Carolina 27603

U. S. Environmental Protection
Agency
Region IV Office
Regional Radiation Representative
345 Courtland Street, N. W.
Atlanta, Georgia 30308

Resident Inspector
U. S. Nuclear Regulatory Commission
Star Route 1
Post Office Box 208
Southport, North Carolina 28461

James P. O'Reilly
Regional Administrator
Region II Office
U. S. Nuclear Regulatory Commission
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Dayne H. Browns, Chief
Radiation Protection Branch
Division of Facility Services
Department of Human Resources
Post Office Box 12200
Raleigh, North Carolina 27605



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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-325

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 65
License No. DPR-71

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Carolina Power & Light Company (the licensee) dated October 3, 1983 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:

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PDR ADOCK 05000324
P PDR

2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 65, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the
Technical Specifications

Date of Issuance: January 11, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 65

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

Remove

3/4 6-2
3/4 6-3
3/4 6-3A
B3/4 6-1

Insert

3/4 6-2
3/4 6-3
3/4 6-3A
B3/4 6-1

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Primary containment leakage rates shall be limited to:

- a. An overall integrated leakage rate of:
 1. Less than or equal to L_a , 0.5 percent by weight of the containment air per 24 hours at P_a , 49 psig, or
 2. Less than or equal to L_t , 0.357 percent by weight of the containment air per 24 hours at a reduced pressure of P_t , 25 psig.
- b. A combined leakage rate of less than or equal to $0.60 L_a$ for all penetrations and all valves listed in Table 3.6.3-1, except for main steam line isolation valves*, subject to Type B and C tests when pressurized to P_a , 25 psig.
- c. *Less than or equal to 11.5 scf per hour for any one main steam line isolation valve when tested at 25 psig.

APPLICABILITY: When PRIMARY CONTAINMENT INTEGRITY is required per Specification 3.6.1.1.

ACTION:

With:

- a. The measured overall integrated primary containment leakage rate exceeding $0.75 L_a$ or $0.75 L_t$, as applicable, or
- b. The measured combined leakage rate for all penetrations and all valves listed in Table 3.6.3-1, except for main steam line isolation valves*, subject to Type B and C tests exceeding $0.60 L_a$, or
- c. The measured leakage rate exceeding 11.5 scf per hour for any one main steam line isolation valve,

restore:

- a. The overall integrated leakage rate(s) to less than or equal to $0.75 L_a$ or $0.75 L_t$, as applicable, and
- b. The combined leakage rate for all penetrations and all valves listed in Table 3.6.3-1, except for main steam line isolation valves*, subject to Type B and C tests to less than or equal to $0.60 L_a$, and

* Exemption to Appendix "J" of 10 CFR 50.

CONTAINMENT SYSTEMS

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 test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50 using the methods and provisions of ANSI N45.4 - 1972:

- 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.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- d. Type B and C tests shall be conducted with gas at P_a , 49 psig, at intervals no greater than 24 months except for tests involving:
 - 1. Air locks,
 - 2. Main steam line isolation valves,
- e. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.3.
- f. Main steam line isolation valves shall be leak tested at least once per 18 months.
- g. All test leakage rates shall be calculated using observed data converted to absolute values. Error analyses shall be performed to select a balanced integrated leakage measurement system.
- h. The provisions of Specification 4.0.2 are not applicable to 24 month and 40 ± 10 month surveillance intervals.

3/4.6 CONTAINMENT SYSTEMS

BASES

3/4.6.1 PRIMARY CONTAINMENT

3/4.6.1.1 PRIMARY CONTAINMENT INTEGRITY

Primary CONTAINMENT INTEGRITY ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the accident analyses. This restriction, in conjunction with the leakage rate limitation, will limit the site boundary radiation doses to within the limits of 10 CFR Part 100 during accident conditions.

3/4.6.1.2 PRIMARY CONTAINMENT LEAKAGE

The limitations on primary containment leakage rates ensure that the total containment leakage volume will not exceed the value assumed in the accident analyses at the peak accident pressure of 49 psig, P_a . As an added conservatism, the measured overall integrated leakage rate is further limited to less than or equal to $0.75 L_a$ or $0.75 L_t$, as applicable, during performance of the periodic tests to account for possible degradation of the containment leakage barriers between leakage tests.

Operating experience with the main steam line isolation valves has indicated that degradation has occasionally occurred in the leak tightness of the valves; therefore, the special requirement for testing these valves.

The surveillance testing for measuring leakage rates is consistent with the requirements of Appendix "J" of 10 CFR Part 50 with the exception of exemptions granted for main steam isolation valve leak testing and testing the airlocks after each opening.

3/4.6.1.3 PRIMARY CONTAINMENT AIR LOCKS

The limitations on closure and leak rate for the containment air locks are required to meet the restrictions on PRIMARY CONTAINMENT INTEGRITY and leak rate given in Specifications 3.6.1.1 and 3.6.1.2. The specification makes allowances for the fact that there may be long periods of time when the air locks will be in a closed and secured position during reactor operation.



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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-324

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 91
License No. DPR-62

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Carolina Power & Light Company (the licensee) dated October 3, 1983 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. 91, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the
Technical Specifications

Date of Issuance: January 11, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 91

FACILITY OPERATING LICENSE NO. DPR-62

DOCKET NO. 50-324

Remove

3/4 6-2
3/4 6-3
3/4 6-3A
B3/4 6-1

Insert

3/4 6-2
3/4 6-3
3/4 6-3A
B3/4 6-1

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Primary containment leakage rates shall be limited to:

- a. An overall integrated leakage rate of:
 1. Less than or equal to L_a , 0.5 percent by weight of the containment air per 24 hours at P_a , 49 psig, or
 2. Less than or equal to L_t , 0.357 percent by weight of the containment air per 24 hours at a reduced pressure of P_t , 25 psig.
- b. A combined leakage rate of less than or equal to $0.60 L_a$ for all penetrations and all valves listed in Table 3.6.3-1, except for main steam line isolation valves*, subject to Type B and C tests when pressurized to P_a , 25 psig.
- c. *Less than or equal to 11.5 scf per hour for any one main steam line isolation valve when tested at 25 psig.

APPLICABILITY: When PRIMARY CONTAINMENT INTEGRITY is required per Specification 3.6.1.1.

ACTION:

With:

- a. The measured overall integrated primary containment leakage rate exceeding $0.75 L_a$ or $0.75 L_t$, as applicable, or
- b. The measured combined leakage rate for all penetrations and all valves listed in Table 3.6.3-1, except for main steam line isolation valves*, subject to Type B and C tests exceeding $0.60 L_a$, or
- c. The measured leakage rate exceeding 11.5 scf per hour for any one main steam line isolation valve,

restore:

- a. The overall integrated leakage rate(s) to less than or equal to $0.75 L_a$ or $0.75 L_t$, as applicable, and
- b. The combined leakage rate for all penetrations and all valves listed in Table 3.6.3-1, except for main steam line isolation valves*, subject to Type B and C tests to less than or equal to $0.60 L_a$, and

* Exemption to Appendix "J" of 10 CFR 50.

CONTAINMENT SYSTEMS

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 test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50 using the methods and provisions of ANSI N45.4 - 1972:

- 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.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- d. Type B and C tests shall be conducted with gas at P_a , 49 psig, at intervals no greater than 24 months except for tests involving:
 - 1. Air locks,
 - 2. Main steam line isolation valves,
- e. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.3.
- f. Main steam line isolation valves shall be leak tested at least once per 18 months.
- g. All test leakage rates shall be calculated using observed data converted to absolute values. Error analyses shall be performed to select a balanced integrated leakage measurement system.
- h. The provisions of Specification 4.0.2 are not applicable to 24 month and 40 ± 10 month surveillance intervals.

3/4.6 CONTAINMENT SYSTEMS

BASES

3/4.6.1 PRIMARY CONTAINMENT

3/4.6.1.1 PRIMARY CONTAINMENT INTEGRITY

Primary CONTAINMENT INTEGRITY ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the accident analyses. This restriction, in conjunction with the leakage rate limitation, will limit the site boundary radiation doses to within the limits of 10 CFR Part 100 during accident conditions.

3/4.6.1.2 PRIMARY CONTAINMENT LEAKAGE

The limitations on primary containment leakage rates ensure that the total containment leakage volume will not exceed the value assumed in the accident analyses at the peak accident pressure of 49 psig, P_a . As an added conservatism, the measured overall integrated leakage rate is further limited to less than or equal to $0.75 L_a$ or $0.75 L_t$, as applicable, during performance of the periodic tests to account for possible degradation of the containment leakage barriers between leakage tests.

Operating experience with the main steam line isolation valves has indicated that degradation has occasionally occurred in the leak tightness of the valves; therefore, the special requirement for testing these valves.

The surveillance testing for measuring leakage rates is consistent with the requirements of Appendix "J" of 10 CFR Part 50 with the exception of exemptions granted for main steam isolation valve leak testing and testing the airlocks after each opening.

3/4.6.1.3 PRIMARY CONTAINMENT AIR LOCKS

The limitations on closure and leak rate for the containment air locks are required to meet the restrictions on PRIMARY CONTAINMENT INTEGRITY and leak rate given in Specifications 3.6.1.1 and 3.6.1.2. The specification makes allowances for the fact that there may be long periods of time when the air locks will be in a closed and secured position during reactor operation.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 65 TO FACILITY LICENSE NO. DPR-71 AND
AMENDMENT NO. 91 TO FACILITY 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 3, 1983, the Carolina Power & Light Company (the licensee) submitted proposed changes to the Technical Specifications appended to Facility Operating License Nos. DPR-71 and DPR-62 for the Brunswick Steam Electric Plant (BSEP), Units 1 and 2. The amendments proposed by the licensee would change the Technical Specifications to provide limited flexibility in scheduling containment leak testing surveillance consistent with planned outages. They do not result in a long-term extension of the surveillance schedule because of the requirements of Specification 4.0.2.b that limits the total maximum combined interval time for any 3 consecutive surveillance intervals not to exceed 3.25 times the specified surveillance interval.

2.0 Evaluation

Brunswick Technical Specification (TS) 4.0.2, where applicable, permits the extension of a surveillance interval up to twenty five percent. However, Brunswick TS 4.6.1.2.h states that the provisions of Specification TS 4.0.2 are not applicable to the surveillance requirements of TS 4.6.1.2 concerning Type A, B, and C leak tests. The proposed change to the Brunswick Unit 1 and Brunswick Unit 2 TS would allow the provisions of Specification 4.0.2 to apply to the 18 month surveillance interval for the Type A Overall Integrated Containment Leak Rate Test (ILRT) and the leak testing of the main steam line isolation valves. This allowance is consistent with the requirements of Appendix J to 10 CFR 50.

Appendix J of 10 CFR 50 states in Section III.A.6(b): "(b) If two consecutive periodic Type A tests fail to meet the applicable acceptance criteria in III.A.5(b), notwithstanding the periodic retest schedule of III.D, a Type A test shall be performed at each plant shutdown for refueling or approximately every 18 months, whichever occurs first, until two consecutive Type A tests meet the acceptance criteria in III.A.5.(b), after which time the retest schedule specified in III.D. may be resumed."

The proposed Technical Specifications would permit the extension of the 18 month surveillance interval referenced above. Furthermore, the staff noted that Appendix J to 10 CFR 50 requires that this surveillance test be performed "...at each plant shutdown for refueling or approximately every 18 months, whichever occurs first,..." We have therefore added this requirement to the Technical Specifications in Section 4.6.1.2.b. on page 3/4 6-3.

We have reviewed these changes as proposed by the licensee and find that these changes make the Brunswick Technical Specifications conform with the particular requirements of Appendix J to 10 CFR 50. Therefore, the changes are acceptable.

3.0 Environmental Considerations

We have determined that the amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR 51.5(d)(4), that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

4.0 Conclusions

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and 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 Contributors: D. Hoffman and M. Grotenhuis

Dated: January 11, 1984