

December 10, 1984

Docket No. 50-325

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 No. 80 to Facility Operating License No. DPR-71 for the Brunswick Steam Electric Plant, Unit 1. The amendment consists of changes to the Technical Specifications in response to your submittal of September 4, 1984, as supplemented October 22, 1984.

The amendment changes the Technical Specifications to permit a one-time extension of the test period for Type B and C local leak rate tests for certain valves from December 12, 1984, or later, until the next refueling outage, which is currently scheduled to begin on or before March 31, 1985. In addition, the test period for the main steam isolation valves is extended 12 days.

A copy of the Safety Evaluation is also enclosed.

Sincerely,

Original signed by/

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

Enclosures:

1. Amendment No. 80 to License No. DPR-71
2. Safety Evaluation

cc w/enclosures:
See next page

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ORB#2 Reading
DEisenhut

MFields

SNorris

MGrotenhuis

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LJHarmon

ELJordan

PMcKee

TBarnhart (8)

WJones

DBrinkman

ACRS (10)

OPA, CMiles

RDiggs

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Extra - 5

JPartlow

DL:ORB#2
SNorris:ajs
11/27/84

DL:ORB#2
MGrotenhuis
11/26/84

DL:ORB#2
DVassallo
11/27/84

OELD
11/29/84

DL:ARB-OR
GLainas
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Handwritten signatures and initials:
- A large signature over the DL:ORB#2 entries.
- "OELD" written over the DL:ORB#2 entry.
- "123" written below the DL:ARB-OR entry.
- "for GL." written to the right of the DL:ARB-OR entry.

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

cc:

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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. 80
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 September 4, 1984, as supplemented October 22, 1984 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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2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 80, 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: December 10, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 80

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

Revise the Appendix A Technical Specifications by removing pages 3/4 6-3A and 3/4 6-3B and inserting revised page 3/4 6-3A and 3/4 6-3B. The changed areas are indicated by vertical lines.

CONTAINMENT SYSTEMSSURVEILLANCE 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.

*The end of the current surveillance period for the surveillance requirements specified below may be extended beyond the time limit specified by Technical Specification 4.0.2. After April 1, 1985, the plant shall not be operated in Operational Conditions 1, 2, or 3 until the surveillance requirements listed below have been completed. Upon accomplishment of the surveillances, the provisions of Technical Specification 4.0.2 shall apply.

Technical Specification 4.6.1.2.d; as applicable to the penetrations and valves which correspond to the Test Nos. listed in Table 4.6.1.2-1.

**The end of the current surveillance period for the surveillance requirements specified below may be extended beyond the time limit specified by Technical Specification 4.0.2a. After April 1, 1985, the plant shall not be operated in Operational Conditions 1, 2, or 3 until the surveillance requirements listed below have been completed. Upon accomplishment of the surveillances, the provisions of Technical Specification 4.0.2a shall apply.

Technical Specification 4.6.1.2.f; as applicable to main steam isolation valves B21-F022A, B21-F022B, B21-F022C, B21-F022D, B21-F028A, B21-F028B, B21-F028C, and B21-F028D.

CONTAINMENT SYSTEMSSURVEILLANCE REQUIREMENTS (Continued)

TABLE 4.6.1.2-1

The following Test Numbers correspond to those listed in Attachment 1 of Carolina Power & Light Company's letter Serial: NLS-84-371 dated September 4, 1984.

CAC-1	E11-31
CAC-2	E11-32
CAC-9	E21-1
CAC-10	E21-2
CAC-11	E21-3
CAC-12	E21-4
CAC-14	E21-5
CAC-15	E21-7
CAC-16	E21-8
CAC-17	E41-2
CAC-18	E41-4
CAC-19	E41-6
CAC-20	E41-8
CAC-21	E51-2
CAC-22	E51-3
CAC-23	E51-4
CAC-24	SA-1
CAC-25	TIP-1
CAC-26	TIP-2
CAC-39	TIP-3
CAC-40	TIP-4
CAC-41	TIP-5
CAC-42	
E11-1	
E11-2	
E11-4	
E11-6	
E11-11	
E11-12	
E11-15	
E11-16	
E11-17	
E11-19	
E11-20	
E11-22	
E11-24	
E11-26	
E11-27	
CAC-45	
E11-28	
E11-29	
E11-30	



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 80 TO FACILITY LICENSE NO. DPR-71

CAROLINA POWER & LIGHT COMPANY

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

DOCKET NO. 50-325

1.0 Introduction

By letter dated September 4, 1984, as supplemented October 22, 1984 the Carolina Power & Light Company (CP&L, the licensee) requested an amendment to Facility Operating License No. DPR-71 for the Brunswick Steam Electric Plant (BSEP), Unit 1. The amendment changes the Technical Specifications to permit a one-time extension of the test period for Type B and C local leak rate tests for certain valves from December 12, 1984, or later, until the next refueling outage, which is currently scheduled to begin on or before March 31, 1985. In addition, the test period for the main steam isolation valves is extended 12 days.

2.0 Evaluation:

We have evaluated the licensee's application and based on our evaluation, we conclude that about one-half of the valves for which exemption was requested may be exempted until March 31, 1985. The basis for our conclusion is in the related Safety Evaluation dated (copy attached). That Safety Evaluation is hereby incorporated as a part of this Safety Evaluation. The specific valves exempted are listed in Technical Specification page 3/4 6-3B which is approved by this amendment.

3.0 Environmental Considerations

The Environmental Assessment and Finding of No Significant Impact was published in the Federal Register on November 6, 1984 (49 FR 44336).

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

Attachment:
Safety Evaluation

Principal Contributor: M. Fields

Dated: December 10, 1984

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO THE ONE-TIME EXTENSION OF CERTAIN

VALVES FROM THE REQUIREMENTS OF APPENDIX J

CAROLINA POWER & LIGHT COMPANY

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

DOCKET NO. 50-325

1.0 Introduction

By letter dated September 4, 1984, as supplemented October 22, 1984 the Carolina Power & Light Company (CP&L, the licensee) requested an amendment to Facility Operating License No. DPR-71 for the Brunswick Steam Electric Plant (BSEP), Unit 1. The amendment would permit a one-time extension of the test period for Type B and C local leak rate tests for certain valves from December 12, 1984, or later, until the next refueling outage, which is currently scheduled to begin on or before March 31, 1985. In addition, the test period for the main steam isolation valves (MSIV) is extended twelve days.

2.0 Background

Brunswick Unit 1 was shut down for a refueling outage beginning in late 1983. The Type B and C local leak rate tests and MSIV tests were done over a period of the first three or four months beginning in December. This outage lasted longer than expected due to unforeseen events. In addition, the next operating cycle was extended from 12 months to 18 months. The combination of the extended outage and the extended cycle caused the two-year inspection interval to end before the current operating cycle. Since the winter electrical load peak period of the CP&L system occurs at the same time as the inspection period, it is desirable to postpone the inspections until the next refueling outage which is scheduled to begin on or before March 31, 1985. The longest extension would be for the valves tested December 12, 1982, a total of about 3½ months. The inspection period for the main steam isolation valves ends March 18, 1985 so the extension for those valves would be a matter of 12 days.

We have reviewed the licensee request and find that approximately one-half of the tests may be delayed until the refueling outage which begins on or before March 31, 1985. The basis of our conclusion is given in the following evaluation.

3.0 Evaluation

By letter dated September 4, 1984, from A. Cutter, CP&L, to D. Vassallo, NRC, the licensee requested an exemption from the requirements of 10 CFR

50, Appendix J, so as to extend the two year testing interval for most of the Brunswick Unit 1 primary containment penetrations. This request for exemption, if granted, would allow the licensee to perform the required Type B and C leak tests on containment penetrations during the next scheduled refueling outage, which the licensee has committed to begin no later than March 31, 1985.

In a follow-up letter, dated October 12, 1984, the licensee provided, for each primary containment penetration, information on the test results from previous local leak rate tests (LLRTs), whether the penetration could be tested during normal power operations, and the estimated dose to plant personnel while performing the leak tests if the tests were performed during the power run.

The staff has reviewed the information contained in the above referenced letters and has concluded that it would be acceptable to postpone, until the March 31, 1985 scheduled refueling outage, the required LLRTs for approximately one-half of the Brunswick Unit 1 primary containment penetrations. These penetrations are identified in Table 1. Accordingly, an exemption from the requirements of Appendix J, 10 CFR 50 should be granted for the valves identified in Table 1, until March 31, 1985.

The staff has concluded that the requested exemption should not be granted for the remaining containment penetrations. Our bases for this finding are the poor LLRT histories and/or the fact that the penetrations can be readily tested during normal plant operations. The previous LLRTs for a portion of these penetrations show a history of poor leak tightness. For many of these penetrations, the test pressure could not be maintained. The balance of these penetrations can be readily tested during normal plant operations, without affecting the safety of the plant or resulting in significant radiation exposure to the plant personnel performing the leak tests. Accordingly, the remaining containment penetrations whose LLRT requirements are also governed by 10 CFR 50, Appendix J, shall be tested in accordance with the time interval specified in Appendix J.

The staff's conclusion that some of the containment penetration LLRTs for Brunswick Unit 1 can be postponed until the March 31, 1985 refueling outage without presenting a significant safety concern is based on the following considerations:

1. During the past two year operating cycle, there was an extended maintenance outage of approximately eight months during which the plant components were not exposed to the normal operating temperature, pressure, and radiation conditions. The time interval of 24 months specified in Appendix J for Type B and C tests was based, in part, on the expected degradation of components exposed to the environment resulting from a full 24 months of normal plant operations. The total exposure time for the containment penetrations to the normal plant operating environment at Brunswick Unit 1 will be substantially less

than 24 months, including the time period involved in the extension to March 31, 1985.

2. The favorable results of previous LLRTs performed during past outages was a major factor in the staff's decision. Each penetration listed in Table 1 has a very good history of substantially lower than normal leak rates based on the previous LLRTs. These previous test results provide a high degree of assurance that an extension in the 24 month test interval requirement will not result in a significant decrease in the integrity of these penetrations.
3. The 24 month interval requirement for Type B and C penetrations is intended to be often enough to prevent significant deterioration from occurring and long enough to permit the LLRTs to be performed during plant outages. Leak testing of the penetrations during plant shutdown is preferable because of the lower radiation exposures to plant personnel. Moreover, some penetrations, because of their intended functions, cannot be tested at power operation. For penetrations that cannot be tested during power operation or those that, if tested during plant operation would cause a degradation in the plant's overall safety (e.g., the closing of a redundant line in a safety system), the increase in confidence of containment integrity following a successful test is not significant enough to justify a plant shutdown specifically to perform the LLRTs within the 24 month time period, as long as the penetrations are in compliance with Items 1 and 2 above.

4.0 Conclusion

Based on the above review, the staff concludes that extending the surveillance interval as described is acceptable for approximately one-half of the valves. The valves for which the surveillance interval may be extended to March 31, 1985 are identified in Table 1.

Enclosure:
Table 1

Principal Contributor: M. Fields

Dated: December 6, 1984

TABLE 1

LIST OF BRUNSWICK 1 CONTAINMENT PENETRATIONS

WHOSE LLRTs CAN BE DELAYED UNTIL MARCH 31, 1985, REFUELING OUTAGE

Penetrations are identified by their Test No. (from October 22, 1984, licensee letter).

<u>Test No.</u>	<u>Test No. (cont'd)</u>
CAC-1	E11-26 thru E11-32
CAC-2	E21-1 thru E21-5
CAC-9 thru CAC-12	E21-7
CAC-14 thru CAC-26	E21-8
CAC-39 thru CAC-42	E41-2
CAC-45	E41-4
E11-1	E41-6
E11-2	E41-8
E11-4	E51-2 thru E51-4
E11-6	G31-2
E11-11	SA-1
E11-12	TIP-1 thru TIP-5
E11-15 thru E11-17	Also, the Main Steam Isolation Valves
E11-19	B21-F022A, F028A
E11-20	B21-F022B, F028B
E11-22	B21-F022C, F028C
E11-24	B21-F022D, F028D