



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

February 9, 1995

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

SUBJECT: EXEMPTION TO 10 CFR 50, APPENDIX J, SECTION III.D.1.(a), BRUNSWICK
STEAM ELECTRIC PLANT, UNIT 1 (TAC NO. M90963)

Dear Mr. Anderson:

In a letter dated November 22, 1994, Carolina Power & Light Company (CP&L) requested a one-time exemption for Brunswick Steam Electric Plant (BSEP), Unit 1, from the schedular requirement in Section III.D.1.(a) of Appendix J to 10 CFR Part 50. This section requires a set of three Type A containment integrated leak rate tests to be performed at approximately equal intervals during each 10-year service period. The third test of the set shall be conducted when the plant is shut down for the 10-year plant inservice inspection. Specifically, CP&L has requested an extension of the second 10-year period for performance of the third Type A test at Brunswick Steam Electric Plant, Unit 1, until the reload 10 outage (B111R1) in September 1996. The exemption would allow the third test during the second 10-year period to correspond with the end of the current American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) inservice inspection interval.

The NRC staff has reviewed the information submitted by CP&L in support of the schedular exemption request. On the basis of the information submitted in the November 22, 1994, CP&L letter, and as discussed in the enclosed Exemption, the NRC staff has concluded that there is a high degree of confidence that the containment will not degrade to an unacceptable extent while this exemption is in effect. Thus, the NRC staff has concluded that the request is justified and that the one-time schedular exemption to extend the third Type A test interval until the refueling outage that begins in September 1996 is granted.

The NRC finds that the granting of this one-time exemption from the requirements of 10 CFR Part 50, Appendix J, Section III.D.1.(a), is authorized by law, will not present an undue risk to public health and safety, is consistent with the common defense and security, and meets the special circumstances described in 10 CFR 50.12(a)(2)(ii).

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Mr. R. A. Anderson

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February 9, 1995

The one-time Exemption is enclosed. A copy of the Exemption is being filed with the Office of the Federal Register for publication.

Sincerely,

/S/

David C. Trimble, Project Manager
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-325

Enclosure:
Exemption to 10 CFR Part 50,
Appendix J

cc w/encl: See next page

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the Matter of)
CAROLINA POWER & LIGHT COMPANY) Docket No. 50-325
(Brunswick Steam Electric Plant, Unit 1))

EXEMPTION

I.

The Carolina Power & Light Company (the licensee), is the holder of Facility Operating License Nos. DPR-71 and DPR-62 which authorizes operation of the Brunswick Steam Electric Plant (BSEP or the facility), Units 1 and 2, respectively, at steady state power levels not in excess of 2436 megawatts thermal. The facility consists of two boiling water reactors located at the licensee's site in Brunswick County, North Carolina. The license provides, among other things, that BSEP is subject to all rules, regulations and Orders of the Nuclear Regulatory Commission (the Commission) now and hereafter in effect.

II.

Section III.D.1.(a) of Appendix J to 10 CFR Part 50 requires the performance of three Type A containment integrated leakage rate tests at approximately equal intervals during each 10-year service period of the primary containment. The third test of each set shall be conducted when the plant is shutdown for the 10-year inservice inspection of the primary containment.

III.

By letter dated November 22, 1994, CP&L requested a one-time exemption from the requirement to perform a set of three Type A tests at approximately equal intervals during each 10-year service period of the primary containment for the Brunswick Steam Electric Plant, Unit 1 (BSEP-1). The requested exemption would permit a one-time extension of the second 10-year service period by approximately 18 months (from the April 1995 refueling outage to the September 1996 refueling outage). The requested temporary relief would permit the third test of the second 10-year service period to correspond with the end of the current American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) inservice inspection interval.

IV.

Section III.D.1.(a) of Appendix J to 10 CFR Part 50 states that a set of three Type A leakage tests shall be performed at approximately equal intervals during each 10-year service period.

The requirement to perform a set of three Type A leakage rate tests at approximately equal intervals during each 10-year containment service period provides assurance that containment leakage will not exceed allowable values. Type A leakage rate tests were performed as required by Appendix J during the first 10-year containment service period that ended in 1986.

Since the first 10-year service period for BSEP-1 was not aligned with the service period for BSEP-2, CP&L moved the end date for the BSEP-1 back to coincide with the BSEP-2 end date. Therefore, the second 10-year service period for BSEP-1 began on July 10, 1986. This caused the first BSEP-1 Type A test for the second period to be performed in May 1987, only 11 months into

the interval. The second Type A test on BSEP-1 was performed within the 40-month plus or minus 10-month interval required by the Technical Specifications.

However, BSEP, Unit 1, experienced an extended shutdown during the period between April 1992 and February 1994, and the licensee notified the NRC in a letter dated August 5, 1994, that the second 10-year period end date was being extended by one year due to this outage. Because of this shutdown, the licensee also rescheduled the remaining two BSEP-1 refueling outages (reloads 9 and 10) during the second 10-year service period. The reload 9 outage was rescheduled to begin in April 1995, and the reload 10 outage was rescheduled to begin in September 1996.

Unlike Section XI, IWA-2400(c), of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Appendix J to 10 CFR Part 50 does not contain any provisions for adjusting the 10-year service period due to extended outages. The licensee has already performed two of the Type A tests at BSEP-1 required during the second 10-year service period. If a Type A test is conducted during the next refueling outage, Appendix J could be interpreted to require a fourth test to satisfy the requirement that the final test of the set be conducted when the plant is shutdown for the 10-year plant inservice inspections. Due to the extension of the inservice inspection period, the final refueling outage of the current inservice inspection period is scheduled for September 1996. This action would eliminate the need to perform an extra Type A test, which could otherwise be required (one test in 1995 and another in 1996) while recoupling the Type A test period with the inservice inspection interval.

V.

The Commission has determined that, pursuant to 10 CFR 50.12(a)(1), this Exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. The Commission further determines that special circumstances, as provided for in 10 CFR 50.12(a)(2)(ii), are present and justify the exemption; namely, that application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule. The underlying purpose of Section III.D.1.(a) of Appendix J to 10 CFR Part 50 is to provide an interval short enough to prevent serious deterioration from occurring between tests and long enough to permit testing to be performed during regular plant outages.

The last two Type A tests at BSEP-1 for the second 10-year period were performed in May 1987 and in February 1991. Delaying the third Type A test until the 1996 refueling outage would result in a test interval of approximately 68 months rather than the stipulated 40 months plus or minus 10 months interval. The licensee has presented the following information which gives a high degree of confidence that the containment will not degrade to an unacceptable extent while this exemption is in effect:

1. The most recent Type A test data show that the "as left" leakage rates (0.2150 weight percent per day and 0.3408 weight percent per day, respectively) were well within the acceptance limit of $0.75 L_a$ (0.375 weight percent per day).
2. A review of the potential primary containment degradation mechanisms, including both activity-based and time-based causes,

concluded that there has not been any alteration or challenge to the primary containment since the last Type A test.

3. No modifications are scheduled that have the potential to adversely affect the integrity of the primary containment boundary.
4. Modification and maintenance activities that will affect the containment leakage rates during the next refueling outage will include administrative controls requiring the performance of local leak rate testing, Type B or Type C tests, as appropriate.
5. The licensee has committed to perform an inspection of the containment barrier during the reload 9 outage.
6. The Type B and Type C local leak rate testing programs will effectively determine containment leakage caused by degradation of containment penetrations.

The NRC staff has reviewed the licensee's request and basis and finds that there is adequate assurance that there will not be any significant undetected degradation in primary containment leakage during the extended 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 in no case at intervals greater than 2 years (Sections III.D.2 and III.D.3 of Appendix J to 10 CFR Part 50).

The NRC staff agrees that the subject exemption request does not pose any undue risk to the public health and safety in that (1) the last as-left Type A test leakage rate was below 0.75 L_a , (2) no modifications are scheduled that have the potential to adversely affect the primary containment integrity,

and (3) there will not be any future maintenance activity during the proposed interval extension that would adversely affect the primary containment leakage rate without administrative control requiring the performance of local leak rate testing. The licensee will continue to demonstrate that the test results from the Type B and C local leak rate tests will be no greater than their specified values in the BSEP Technical Specifications prior to restart after a refueling outage. 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. Based on these considerations, the NRC staff concludes that the licensee's request for a one-time exemption to Section III.D.1.(a) of Appendix J to 10 CFR Part 50 should be granted.

VI.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, this exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. The Commission further determines that special circumstances, as provided in 10 CFR 50.12(a)(2)(ii), are present justifying the exemption; namely that the application of this regulation is not necessary to achieve the underlying purpose of the rule. Further, the NRC staff also finds that the protection provided by the licensee against potentially excessive containment leakage will not present an undue risk to the public health and safety. The application of the regulation is not necessary to assure the integrity of the containment in the event of a postulated design basis loss-of-coolant accident.

The Commission hereby grants the one-time Exemption with respect to the requirements of 10 CFR Part 50, Appendix J, Section III.D.1.(a), to extend the interval between the second and third Type A test for BSEP-1 until the September 1996 refueling outage.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of the subject Exemption will not have a significant effect on the quality of the human environment (60 FR 6567).

This Exemption is effective upon issuance and shall expire at the completion of the 1996 refueling outage (B111R1).

FOR THE NUCLEAR REGULATORY COMMISSION

(Original Signed By)

Steven A. Varga, Director
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland
this 9th day of February

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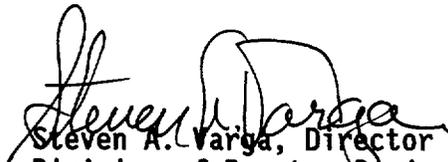
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FOR THE NUCLEAR REGULATORY COMMISSION



Steven A. Varga, Director
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland
this 9th day of February