

UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of

CAROLINA POWER & LIGHT COMPANY

H. B. Robinson Steam Electric Plant,
Unit No. 2

Docket No. 50-261

EXEMPTION

I.

Carolina Power & Light Company (the licensee) is the holder of Facility Operating License No. DPR-23, which authorizes operation of the H. B. Robinson Steam Electric Plant, Unit No. 2. The license provides, among other things, that the facility is subject to all rules, regulations and Orders of the Nuclear Regulatory Commission (the Commission) now or hereafter in effect.

The facility is a Westinghouse pressurized water reactor located at the licensee's site in Darlington County, South Carolina.

II.

Paragraph III.A.3 of Appendix J to 10 CFR Part 50 requires that all Type A (Containment Integrated Leak Rate) tests be performed in accordance with ANSI N45.4-1972, "Leakage Rate Testing of Containment Structures for Nuclear Reactors." ANSI N45.4 requires that leakage calculations be performed using the Total Time method or the Point-to-Point method.

By letter dated April 17, 1987, the licensee requested an exemption from 10 CFR Part 50, Appendix J, Paragraph III.A.3, with regard to Type A, Containment Integrated Leak Rate Test calculations. Specifically, the licensee requested an exemption to permit the use of the Mass-Point method (as provided in ANSI/ANS 56.8-1981, paragraph 5) rather than the Total Time method described in ANSI N45.4-1972, paragraph 7.9. In support of its request, the licensee notes that the Mass-Point method is a newer and more accurate method of

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calculating containment leakage. The licensee also notes that utilizing the Total-Time method produces results which are less reliable than the Mass-Point method. The licensee has, therefore, requested the exemption to enable use of the Mass-Point method.

The acceptability of the exemption request is addressed below. More details are contained in the Commission's related Safety Evaluation concurrently issued with this exemption.

III.

The licensee's exemption request under consideration involves Type A testing requirements of Appendix J for containments. As indicated in the licensee's letter of April 17, 1987, until about 1976, containment leakage rate calculations were performed using only the Point-to-Point or the Total Time methods in accordance with ANSI N45.4-1972. In 1976, the NRC staff unofficially recognized the merits of a newer method, the Mass-Point method. ANSI N45.4-1972 has since been revised to incorporate the Mass-Point method into ANSI/ANS 56.8-1981. A proposed revision to Appendix J, which would permit use of the Mass-Point method, was published for public comment on October 29, 1986 (51 FR 39538); The licensee submits that the more accurate technique provides increased confidence in the integrity of the containment.

In addition, the licensee provided a determination that special circumstances exist under 10 CFR 50.12(a). The rule specifies particular methods for calculating leakage to assure that accurate and conservative methods are used to assess the results of containment leak rate tests. As discussed above, the licensee has determined that this underlying purpose is achieved

with use of the more accurate Mass-Point method. Therefore, they concluded that application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule. The staff agrees with the licensee's conclusion and has determined that under 10 CFR 50.12(a)(2)(ii) special circumstances exist. Based on the above discussion, the licensee's request for exemption (allowing the Mass-Point technique for calculating containment leakage rate) from the requirements of Appendix J is granted for H. B. Robinson, Unit No. 2, with the condition that the test be conducted over a period of at least 24 hours.

IV.

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 has further determined that special circumstances, as provided in 10 CFR 50.12(a)(2)(ii), are present justifying the exemption. Namely, application of the regulation in the particular circumstances is not necessary to achieve its underlying purpose, which is to ensure that accurate and conservative methods are used to assess the results of containment leak rate tests. The Mass-Point method, which provides accurate results, has been a widely used method of performing leak rate calculations and satisfies the underlying purpose of the rule.

Accordingly the Commission hereby grants an exemption from Paragraph III.A.3 of Appendix J to 10 CFR Part 50 to allow use of the Mass-Point method in performing leakage rate calculations associated with Containment Integrated Leakage Rate Tests, provided that the minimum test duration is 24 hours.

Pursuant to 10 CFR 51.32, the Commission has determined that the

granting of this Exemption will have no significant impact on the environment (51 FR 18296).

This Exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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

Dated at Bethesda, Maryland
this 22 day of May, 1987.

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