

VIRGINIA ELECTRIC AND POWER COMPANY
 RICHMOND, VIRGINIA 23261

May 26, 1988

D. S. CRUDEN
 VICE PRESIDENT - NUCLEAR

U. S. Nuclear Regulatory Commission
 Attention: Document Control Desk
 Washington, D. C. 20555

Serial No. 88-234
 NAPS/JHL
 Docket Nos. 50-338
 50-339
 License Nos. NPF-4
 NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 AND 2
10 CFR 50, APPENDIX J EXEMPTION REQUEST

Pursuant to 10 CFR 50.12, Virginia Electric and Power Company requests an exemption from 10 CFR 50, Appendix J, Paragraph III.A.3, which requires that 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." Since the issuance of ANSI N45.4-1972, a more accurate method of determining containment leakage rates, the mass point method, was developed as described in ANSI 56.8-1987, "Containment System Leakage Testing Requirements." Therefore, Virginia Electric and Power Company is requesting an exemption to allow use of the mass point method for calculating containment leakage rates.

Based on the justification provided in Attachment 1, we conclude that the exemption from the requirements of Appendix J, Paragraph III.A.3 is justified pursuant to 10 CFR 50.12(a)(1) and 10 CFR 50.12(a)(2)(ii) in that it is authorized by law; will not present undue risk to public health and safety, and is consistent with the common defense and security. Additionally, special circumstances are present in this case in that application of the regulation is not necessary to achieve the underlying purpose of the rule. The mass point method will satisfy the accuracy requirements of 10 CFR 50, Appendix J, Paragraph III.A.3 for Type A tests.

Further, a change to our Technical Specifications is required in order to reflect our exemption requests. The proposed changes to the Technical Specifications are contained in Attachment 2 and the discussion of the proposed changes is contained in Attachment 3.


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It is requested that the proposed exemption requests and proposed Technical Specification changes be acted upon by October 1, 1988, so that the next Type A test schedule can be developed.

The exemption requests and proposed Technical Specification changes have been reviewed and approved by the Station Nuclear Safety and Operating Committee and the Safety Evaluation and Control Staff. It has been determined that the exemption requests and the Technical Specification changes do not pose an unreviewed safety question as defined by 10 CFR 50.59 nor do they pose a significant safety hazards consideration as defined by 10 CFR 50.92.

In accordance with 10 CFR 170, an application fee of \$150 is enclosed. If you have any questions or need additional information to process this request please contact us.

Very truly yours,



D. S. Cruden

Attachments

- 1) Justification For Exemption From 10 CFR 50, Appendix J, Paragraph III.A.3
- 2) Proposed Technical Specification Changes
- 3) Discussion Of Proposed Technical Specification Changes
- 4) Application Fee

cc: U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N. W.
Suite 2900
Atlanta, Georgia 30323

Mr. J. L. Caldwell
NRC Senior Resident Inspector
North Anna Power Station

Commissioner
Department of Health
Room 400
109 Governor Street
Richmond, Virginia 23219

COMMONWEALTH OF VIRGINIA)
)
CITY OF RICHMOND)

The foregoing document was acknowledged before me, in and for the City and Commonwealth aforesaid, today by D. S. Cruden who is Vice President - Nuclear, of Virginia Electric and Power Company. He is duly authorized to execute and file the foregoing document in behalf of that Company, and the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 26TH day of May, 19 88.
My Commission expires: February 25, 19 90.

Vicki L. Hull
Notary Public

(SEAL)

ATTACHMENT 1

JUSTIFICATION FOR EXEMPTION FROM
10 CFR 50, APPENDIX J, PARAGRAPH III.A.3
NORTH ANNA UNIT NOS. 1 AND 2

BACKGROUND

In 1973, 10 CFR 50, Appendix J was issued to establish requirements for Primary Reactor Containment Leakage Testing. Appendix J incorporated by reference ANSI N45.4-1972, "Leakage Rate Testing of Containment Structures for Nuclear Reactors." The Standard requires that containment leakage calculations be performed using the point-to-point method or total time method. The total time method was used most by the nuclear industry until about 1976. As noted in ANSI N45.4, the point-to-point method is suited to uninsulated containments where atmospheric stability is affected by outside diurnal change, while the total time method is appropriate for insulated containments that are relatively unaffected by diurnal changes. In 1976, an article (reference: "Containment Leak Rate Testing: Why the Mass-Point Analysis Method is Preferred," Power Engineering, February 1976) was written which compared the results of the test analyses that were performed using point-to-point, total time, and mass-point techniques. A revision to the Standard (reference: ANSI/ANS 56.8-1987, "Containment System Leakage Testing") specifies the use of mass-point analysis. A proposed rule was noticed in the Federal Register, Volume 53, No. 39, and it indicates that 10 CFR 50, Appendix J will be revised to allow the use of the mass-point method for calculating the Type A test leakage rate.

JUSTIFICATION

Virginia Electric and Power Company believes that this exemption should be granted pursuant to 10 CFR 50.12 (a)(2)(ii); i.e., application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule, which is to provide an accurate and conservative test of containment integrity. This request is consistent with the proposed rule that was noticed in the Federal Register, Volume 53, No. 39, and it indicates that 10 CFR 50, Appendix J will be revised to allow the use of the mass-point method for calculating the Type A test leakage rate.

Additionally, Virginia Electric and Power Company believes that this exemption request will not result in undue risk to the health or safety of the public, in that; the proposed exemption does not change, modify, or restrict existing plant safety limits, safety settings, systems or operation; or impact the design basis of the containment or modify its response during a DBA.

ATTACHMENT 2

PROPOSED TECHNICAL SPECIFICATIONS CHANGES
NORTH ANNA UNITS 1 AND 2