

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

September 16, 1999

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Serial No. 99-380
NL&OS/ETS R0
Docket Nos. 50-338
50-339
50-280
50-281
License Nos. NPF-4
NPF-7
DPR-32
DPR-37

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATIONS UNITS 1 AND 2
SURRY POWER STATIONS UNITS 1 AND 2
ASME SECTION XI RELIEF REQUESTS
CONTAINMENT LINER IWE-3, 7, AND 8

North Anna Power Station Units 1 and 2 and Surry Power Station Units 1 and 2 are presently in the second and third ten year inservice inspection interval, respectively. By Federal Register Notice 154 (Volume 61), dated August 8, 1996, the Nuclear Regulatory Commission amended its regulations to incorporate by reference the 1992 Edition of the ASME Code with the 1992 Addenda of Subsections IWE and IWL. By letters dated August 4 and 28, 1998 (Serial Nos. 98-286 and 98-288) relief requests from the Code requirements for Subsections IWE and IWL were submitted for both stations. These relief requests were subsequently approved by the NRC on April 14 and 21, 1999. Additional relief requests from the containment liner examination requirements have since been identified for each unit. Therefore, pursuant to 10 CFR 50.55a relief is requested from specific requirements of Subsection IWE of the 1992 Edition with the 1992 Addenda of ASME Section XI.

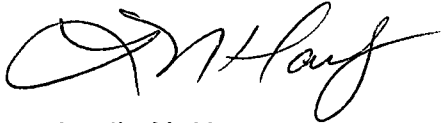
The relief requests and their bases are included in Attachments 1 and 2 to this letter for North Anna and Surry, respectively. These relief requests have been reviewed and approved by the Station Nuclear Safety and Operating Committees.

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There are no new commitments made in this letter. If you have any questions concerning this request, please contact us.

Very truly yours,



Leslie N. Hartz
Vice President - Nuclear Engineering and Services

No new commitments are made in this letter.

Attachment

cc: U. S. Nuclear Regulatory Commission
Region II
Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, Georgia 30323

Mr. M. J. Morgan
NRC Senior Resident Inspector
North Anna Power Station

Mr. R. A. Musser
NRC Senior Resident Inspector
Surry Power Station

Mr. M. Grace
Authorized Nuclear Inspector
North Anna Power Station

Mr. R. Smith
Authorized Nuclear Inspector
Surry Power Station

Mr. J. E. Reasor
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Innsbrook Corporate Center
4201 Dominion Blvd.
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Attachment 1

**North Anna Power Station Units 1 and 2
ASME Section IWE and IWL Relief Requests
First Containment Inspection Interval**

Virginia Electric and Power Company

Virginia Electric & Power Company
North Anna Power Station Units 1 and 2
First Containment Inspection Interval

Relief Request RR-IWE3

SYSTEM/COMPONENT(S) FOR WHICH RELIEF IS REQUESTED:

All components subject to the rules and requirements for repair, replacement or modification of Class MC, IWE-5000 system pressure testing visual examination in accordance with the 1992 Edition, 1992 Addenda of ASME Section XI.

CODE REQUIREMENT(S):

Paragraph IWE-5240 of the 1992 Edition, 1992 Addenda of ASME Section XI states that the requirements of Paragraph IWA-5240 for visual examination, VT-2 are applicable following repair, replacement, or modification.

CODE REQUIREMENT FROM WHICH RELIEF IS REQUESTED:

Relief is requested from performing the VT-2 visual examination in connection with system pressure testing following repair, replacement or modification under Article IWE-5000.

BASIS FOR RELIEF:

Repair/replacements are performed in accordance with the Virginia Power Repair/Replacement Program which specifies the repair methods and nondestructive examinations necessary to ensure the original quality and construction requirements of the containment vessel are met.

ASME Section XI, Paragraph IWE-5210 states that except as noted within Paragraph IWE-5240, the requirements of Article IWA-5000 are not applicable to Class MC or Class CC components. Paragraph IWE-5240 states that the requirements of Paragraph IWA-5240 (corrected from IWA-5246 to IWA-5240 in the 93 addenda) for visual examinations are applicable. Paragraph IWA-5240 identifies a "VT-2" visual examination. VT-2 examinations are conducted to detect evidence of leakage from pressure retaining components, with or without leakage collection systems, as required during the conduct of a system pressure test. In addition, personnel performing VT-2 examinations are required to be qualified in accordance with Subarticle IWA-2300 of ASME Section XI.

Table IWE-2500-1, Examination Category E-P, identifies the examination method of 10CFR50, Appendix J following each repair, modification, or replacement and does not specifically identify a VT-2 visual examination. 10CFR50, Appendix J provides requirements for testing as well as acceptable leakage criteria. These tests are performed by qualified Appendix J test personnel and utilize calibrated equipment to determine acceptability. Additionally, 10CFR50.55a(b)(2)(x)(E) requires a general visual examination of the containment each period that would identify any structural degradation that may contribute to leakage. A "VT-2" visual examination will not provide additional assurance of leak integrity beyond that provided by those examinations specified in current repair/replacement practices or 10CFR50 Appendix J requirements.

Relief is requested in accordance with 10CFR50.55a(a)(3)(i). Pressure testing in accordance with 10CFR50, Appendix J, provides an adequate level of quality and safety by assuring continued leak integrity.

ALTERNATIVE EXAMINATION(S):

Testing and examination shall be conducted in accordance with 10CFR50, Appendix J as applicable. A preservice visual examination (VT-3) will be performed on the repair/replacement.

Virginia Electric & Power Company
North Anna Power Station Units 1 and 2
First Containment Inspection Interval

Relief Request RR-IWE7

SYSTEM/COMPONENT(S) FOR WHICH RELIEF IS REQUESTED:

All components (MC and metallic liners of CC components) within the scope of Subsection IWE of the 1992 Edition, 1992 Addenda of ASME Section XI.

CODE REQUIREMENT(S):

Paragraph IWE-3200 in the 1992 Edition, 1992 Addenda of ASME Section XI states in the last sentence of the paragraph the following; "Visual examinations that detect surface flaws or areas that are suspect shall be supplemented by either surface or volumetric examination."

CODE REQUIREMENT FROM WHICH RELIEF IS REQUESTED:

Relief is requested from the mandatory requirement to supplement visual examinations which detect surface flaws or areas that are suspect with either a surface or volumetric examination.

BASIS FOR RELIEF:

The 1992 Code requirement mandates supplemental examinations in all cases where surface flaws are detected or suspected. The mandatory requirement established by this Code is considered a hardship and is not considered necessary in all cases. Minor surface conditions are frequently found within containment on the surfaces subject to the IWE examinations. These conditions may be preliminarily identified as relevant by the examiner. The significance of the condition is not determined until evaluated by engineering. The above Code wording is conservatively interpreted to be very restrictive, requiring supplemental examination regardless if the condition is disposed of by the evaluating personnel as requiring no further action. Requiring supplemental examination in all cases result in unnecessary radiation exposure and examination costs, without commensurate safety benefit.

The ASME Code has modified the requirement in the 1998 Edition of ASME Section XI. The sentence now reads, "Visual examinations that detect surface flaws or areas that

are suspect shall be supplemented by either surface or volumetric examination, when specified as a result of the engineering evaluation performed in IWE-3122.3." The Code now recognizes the need for engineering discretion in assigning supplemental examinations.

Allowing discretion in supplemental examinations by determining requirements through engineering evaluation is a more practical alternative to the current requirement of mandatory surface or volumetric examination. The alternative provided will continue to ensure containment integrity. As such, relief is requested from this Code requirement per 10CFR50.55a(a)(3).

ALTERNATIVE REQUIREMENTS:

The following wording shall be substituted for the sentence in question; "Visual examinations that detect surface flaws or areas that are suspect shall be supplemented by either surface or volumetric examination, when specified as a result of the engineering evaluation performed in IWE-3122.4." The Code paragraph referenced in the alternative is based upon the 1992 Edition, 1992 Addenda of ASME Section XI.

Virginia Electric & Power Company
North Anna Power Station Units 1 and 2
First Containment Inspection Interval

Relief Request RR-IWE8

SYSTEM/COMPONENT(S) FOR WHICH RELIEF IS REQUESTED:

All components (MC and metallic liners of CC components) within the scope of Subsection IWE of the 1992 Edition, 1992 Addenda of ASME Section XI.

CODE REQUIREMENT(S):

Table IWE-2500-1, Examination Category E-P and the associated duties of the inspector, IWA-2110, found in the 1992 Edition, 1992 Addenda of ASME Section XI.

CODE REQUIREMENT FROM WHICH RELIEF IS REQUESTED:

Relief is requested from the Category E-P requirements and the associated inspector review as it applies to the Appendix J program required by 10CFR50, Appendix J.

BASIS FOR RELIEF:

The 1992 Code requirements identified in Category E-P combine portions of programs which have historically been separate at the station, the ASME Section XI program required by 10CFR50.55a and the Appendix J program required by 10CFR50 Appendix J. The combination appears to adversely affect only containment (IWE) repairs, replacements and modifications, and components normally tested to Type B requirements of Appendix J (i.e., containment penetration bellows, airlocks, seals and gaskets).

Item E9.10 of the category identifies post repair, modification, or replacement requirements that are also stated in IWE-5000 and would be required through the repair/replacement program for containment in IWE-4000 and IWE-7000. As such, the item is a duplication of requirements stated elsewhere in the Code.

Item E9.20 of the category requires Appendix J, Type B tests on containment penetration bellows. There are no components of this type identified for containment.

Item E9.30 of the category requires Appendix J, Type B tests on containment airlocks. This requirement is also specified by 10CFR50 Appendix J, Type B testing

requirements. The net effect of this requirement is to require additional record keeping by specifying that Type B tests be listed in the ASME Section XI Inspection Plan and Schedule, which are required in IWA-2420. Additionally, the tests come under the review of the Authorized Nuclear Inservice Inspector (ANII). These added administrative requirements offer no commensurate safety benefit beyond that already provided by the current Appendix J, Type B requirements. As such, the requirement is considered an unnecessary administrative burden.

Item E9.40 of the category requires Appendix J, Type B tests on containment seals and gaskets. The requirement is also specified by 10CFR50 Appendix J, Type B testing requirements. The net effect is as stated previously for Item E9.30.

The Code Committee has since eliminated Category E-P from Table IWE-2500-1 in the 1998 Edition of ASME Section XI. The elimination of the requirement by the Code supports our conclusion that the original requirement did not provide commensurate safety benefit. As such, relief is requested in accordance with 10CFR50.55a(a)(3)(i). Pressure testing in accordance with 10CFR50, Appendix J and its own program requirements, provides an adequate level of quality and assurance of safety.

ALTERNATIVE REQUIREMENT(S):

Testing and examination shall be conducted in accordance with 10CFR50, Appendix J as applicable. No additional requirements necessitated by Table IWE-2500-1 Category E-P nor IWA-2110 as it would of applied to the Appendix J program will be followed.

Attachment 2

**Surry Power Station Units 1 and 2
ASME Section IWE and IWL Relief Requests
First Containment Inspection Interval**

Virginia Electric and Power Company

Virginia Electric & Power Company
Surry Power Station Units 1 and 2
First Containment Inspection Interval

Relief Request RR-IWE3

SYSTEM/COMPONENT(S) FOR WHICH RELIEF IS REQUESTED:

All components subject to the rules and requirements for repair, replacement or modification of Class MC, IWE-5000 system pressure testing visual examination in accordance with the 1992 Edition, 1992 Addenda of ASME Section XI.

CODE REQUIREMENT(S):

Paragraph IWE-5240 of the 1992 Edition, 1992 Addenda of ASME Section XI requires that the requirements of Paragraph IWA-5240 for visual examination, VT-2 are applicable following repair, replacement, or modification.

CODE REQUIREMENT FROM WHICH RELIEF IS REQUESTED:

Relief is requested from performing the VT-2 visual examination in connection with system pressure testing following repair, replacement or modification under Article IWE-5000.

BASIS FOR RELIEF:

Repair/replacements are performed in accordance with the Virginia Power Repair/Replacement Program which specifies the repair methods and nondestructive examinations necessary to ensure the original quality and construction requirements of the containment vessel are met.

ASME Section XI, Paragraph IWE-5210 states that except as noted within Paragraph IWE-5240, the requirements of Article IWA-5000 are not applicable to Class MC or Class CC components. Paragraph IWE-5240 states that the requirements of Paragraph IWA-5240 (corrected from IWA-5246 to IWA-5240 in the 93 addenda) for visual examinations are applicable. Paragraph IWA-5240 identifies a "VT-2" visual examination. VT-2 examinations are conducted to detect evidence of leakage from pressure retaining components, with or without leakage collection systems, as required

during the conduct of a system pressure test. In addition, personnel performing VT-2 examinations are required to be qualified in accordance with Subarticle IWA-2300 of ASME Section XI.

Table IWE-2500-1, Examination Category E-P, identifies the examination method of 10CFR50, Appendix J following each repair, modification, or replacement and does not specifically identify a VT-2 visual examination. 10CFR50, Appendix J provides requirements for testing as well as acceptable leakage criteria. These tests are performed by qualified Appendix J test personnel and utilize calibrated equipment to determine acceptability. Additionally, 10CFR50.55a(b)(2)(x)(E) requires a general visual examination of the containment each period that would identify any structural degradation that may contribute to leakage. A "VT-2" visual examination will not provide additional assurance of leak integrity beyond that provided by those examinations specified in current repair/replacement practices or 10CFR50 Appendix J requirements.

Relief is requested in accordance with 10CFR50.55a(a)(3)(i). Pressure testing in accordance with 10CFR50, Appendix J, provides an adequate level of quality and safety by assuring continued leak integrity.

ALTERNATIVE EXAMINATION(S):

Testing and examination shall be conducted in accordance with 10CFR50, Appendix J as applicable. A preservice visual examination (VT-3) will be performed on the repair/replacement.

Virginia Electric & Power Company
Surry Power Station Units 1 and 2
First Containment Inspection Interval

Relief Request RR-IWE7

SYSTEM/COMPONENT(S) FOR WHICH RELIEF IS REQUESTED:

All components (MC and metallic liners of CC components) within the scope of Subsection IWE of the 1992 Edition, 1992 Addenda of ASME Section XI.

CODE REQUIREMENT(S):

Paragraph IWE-3200 in the 1992 Edition, 1992 Addenda of ASME Section XI states in the last sentence of the paragraph the following; "Visual examinations that detect surface flaws or areas that are suspect shall be supplemented by either surface or volumetric examination."

CODE REQUIREMENT FROM WHICH RELIEF IS REQUESTED:

Relief is requested from the mandatory requirement to supplement visual examinations which detect surface flaws or areas that are suspect with either a surface or volumetric examination.

BASIS FOR RELIEF:

The 1992 Code requirement mandates supplemental examinations in all cases where surface flaws are detected or suspected. The mandatory requirement established by this Code is considered a hardship and is not considered necessary in all cases. Minor surface conditions are frequently found within containment on the surfaces subject to the IWE examinations. These conditions may be preliminarily identified as relevant by the examiner. The significance of the condition is not determined until evaluated by engineering. The above Code wording is conservatively interpreted to be very restrictive, requiring supplemental examination regardless if the condition is disposed of by the evaluating personnel as requiring no further action. Requiring supplemental examination in all cases result in unnecessary radiation exposure and examination costs, without commensurate safety benefit.

The ASME Code has modified the requirement in the 1998 Edition of ASME Section XI. The sentence now reads, "Visual examinations that detect surface flaws or areas that are suspect shall be supplemented by either surface or volumetric examination, when specified as a result of the engineering evaluation performed in IWE-3122.3." The Code now recognizes the need for engineering discretion in assigning supplemental examinations.

Allowing discretion in supplemental examinations by determining requirements through engineering evaluation is a more practical alternative to the current requirement of mandatory surface or volumetric examination. The alternative provided will continue to ensure containment integrity. As such, relief is requested from this Code requirement per 10CFR50.55a(a)(3).

ALTERNATIVE REQUIREMENTS:

The following wording shall be substituted for the sentence in question; "Visual examinations that detect surface flaws or areas that are suspect shall be supplemented by either surface or volumetric examination, when specified as a result of the engineering evaluation performed in IWE-3122.4." The Code paragraph referenced in the alternative is based upon the 1992 Edition, 1992 Addenda of ASME Section XI.

Virginia Electric & Power Company
Surry Power Station Units 1 and 2
First Containment Inspection Interval

Relief Request RR-IWE8

SYSTEM/COMPONENT(S) FOR WHICH RELIEF IS REQUESTED:

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CODE REQUIREMENT(S):

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requirements. The net effect of this requirement is to require additional record keeping by specifying that Type B tests be listed in the ASME Section XI Inspection Plan and Schedule, which are required in IWA-2420. Additionally, the tests come under the review of the Authorized Nuclear Inservice Inspector (ANII). These added administrative requirements offer no commensurate safety benefit beyond that already provided by the current Appendix J, Type B requirements. As such, the requirement is considered an unnecessary administrative burden.

Item E9.40 of the category requires Appendix J, Type B tests on containment seals and gaskets. The requirement is also specified by 10CFR50 Appendix J, Type B testing requirements. The net effect is as stated previously for Item E9.30.

The Code Committee has since eliminated Category E-P from Table IWE-2500-1 in the 1998 Edition of ASME Section XI. The elimination of the requirement by the Code supports our conclusion that the original requirement did not provide commensurate safety benefit. As such, relief is requested in accordance with 10CFR50.55a(a)(3)(i). Pressure testing in accordance with 10CFR50, Appendix J and its own program requirements, provides an adequate level of quality and assurance of safety.

ALTERNATIVE REQUIREMENT(S):

Testing and examination shall be conducted in accordance with 10CFR50, Appendix J as applicable. No additional requirements necessitated by Table IWE-2500-1 Category E-P nor IWA-2110 as it would of applied to the Appendix J program will be followed.