

VIRGINIA ELECTRIC AND POWER COMPANY

RICHMOND, VIRGINIA 23261

May 30, 2001

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

Serial No.: 01-329  
NL&OS/ETS: Rev. 0  
Docket No.: 50-338/-339  
License No.: NPF-4/-7

Gentlemen:

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**NORTH ANNA POWER STATION UNITS 1 & 2**  
**ASME SECTION XI SUBSECTION IWF RELIEF REQUESTS CS-2 AND CS-3**

Currently, North Anna Unit 1 is in the third ten-year inspection interval, first period, having completed one refueling outage in the period. North Anna Unit 2 has completed the last refueling outage of the second ten-year inspection interval and is closing out the interval requirements. Due to a recent interpretation of Code requirements for snubber testing, we are requesting relief from specific Code requirements for snubber testing already performed during this current interval for both units and for the remainder of the third interval for Unit 1. Relief Requests CS-2 and CS-3 for North Anna Unit 1 address snubber functional testing requirements (IWF-5000) associated with the ASME Section XI Code, 1989 Edition for the third inspection interval. Relief Requests CS-2 and CS-3 for North Anna Unit 2 address snubber functional testing requirements (IWF-5000) and repair and replacement activities of snubbers associated with the ASME Section XI Code, 1986 Edition for the second inspection interval. These relief requests are included in Attachments 1 and 2 for your review and approval.

Relief Requests CS-2 for North Anna Unit 1, and CS-2 and CS-3 for North Anna Unit 2 are requested under the provisions for impractical Code requirements of 10 CFR 50.55a(g)(5)(iv). Relief Request CS-3 for North Anna Unit 1 is requested under the provisions of 10 CFR 50.55a(a)(3)(i), where the proposed alternative provides an acceptable level of quality and safety.

If you have any questions or require additional information, please contact us.

Very truly yours,



L. N. Hartz  
Vice President - Nuclear Engineering and Services

Attachments

A047

Commitments made in this letter:

1. There are no new commitments in this letter.

U.S. Nuclear Regulatory Commission  
Region II  
Sam Nunn Federal Atlanta Center  
61 Forsyth Street, SW  
Suite 23T85  
Atlanta, Georgia 30303

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

Mr. J. E. Reasor, Jr. (w/out attachments)  
Old Dominion Electric Cooperative  
Innsbrook Corporate Center  
Suite 300  
4201 Dominion Blvd.  
Glen Allen, Virginia 23060

Mr. M. Grace (w/out attachments)  
Authorized Nuclear Inspector  
North Anna Power Station

Attachment 1

Relief Requests CS-2 and CS-3  
for Snubber Testing

Virginia Electric and Power Company  
(Dominion)  
North Anna Power Station Unit 1

Virginia Electric and Power Company  
North Anna Power Station Unit 1  
Third Ten Year Interval

RELIEF REQUEST CS-2

I. Identification of Components:

Class 1, 2, and 3 Snubbers

II. Code Requirement:

Code required inservice testing (Section XI of the ASME Boiler and Pressure Vessel Code, 1989 Edition, IWF-5200 and IWF-5300) on the snubbers identified above, and the associated snubber testing review performed by the Authorized Nuclear Inservice Inspector (ANII) in IWA-2110.

III. Basis for Relief:

The Final Rulemaking Federal Register (FR) dated November 22, 1999 endorsed the 1995 ASME Section XI through the 1996 Addenda for use by licensees performing 10-year updates. Within the discussion, references were made that the new rules, as well as the old, required the testing of snubbers per ASME Section XI, IWF-5000. This discussion acknowledged that previous Federal Register Rulemaking discussions (reference 62FR 63903; December 3, 1997) on snubber testing may have been confusing with regard to the applicability of 10CFR50.55a and snubber testing. The discussion in the earlier FR notice (1997) appeared to direct licensees to Technical Specifications for testing requirements of snubbers. Regardless, the discussion in the 1999 FR notice directs licensees to follow the requirements of IWF-5000 noting that the requirement has been in effect since 1978.

North Anna Unit 1 has completed a first period, third interval refueling outage to the criteria of Technical Specifications for snubber testing requirements. Only one refueling outage remains in the first period, which started May 1, 1999. The ISI program was developed assuming that snubbers were required to be functionally tested in accordance with Technical Specifications and not with the ASME Section XI Code, IWF-5000. This assumption was based upon earlier interpretations of the Federal Register Rulemaking discussion (reference 57FR34666, August 6, 1992), which explicitly states that 10 CFR 50.55a does not specify requirements for the testing of snubbers. The FR notice states that requirements for the testing of snubbers are generally governed by plant Technical Specifications. As such, the North Anna ISI Program submitted to the

NRC for the third ten-year interval only states that the testing of snubbers will be developed in accordance with plant Technical Specifications. No relief request from Section XI, Subsection IWF-5200 and IWF-5300 was developed at that time, as none was thought necessary.

The North Anna Unit 1, Class 1, 2, and 3 snubbers have been functionally tested as required by plant Technical Specification 4.7.10. Technical differences between the Code and Technical Specification requirements are minor (e.g., size of sample populations, Technical Specifications has a larger initial sample for testing, additional examination requirements as a result of failures are different, but accomplish the same purpose), and the testing being performed continues to assure component operability. Testing results were reviewed as required by the quality assurance program, however there was no ANII involvement since none was necessary.

Given the direct reference to IWF-5000 in the 1999 Federal Register notice, a Code relief request is necessary to permit the Technical Specifications functional testing requirements to serve as the sole requirement for snubber testing performed to date for North Anna Unit 1 third interval. Since no IWF-5000 snubber testing has been performed and the past refueling outage is completed, the completion of Code requirements referenced are considered impractical and relief is requested per 10 CFR 50.55a(g)(5)(iv).

#### IV. Proposed Alternate Requirements:

In lieu of the Code requirements specified in IWF-5200 and IWF-5300 for snubber inservice testing and IWA-2110 concerning the ANII review of snubber testing results, the functional testing requirements of North Anna Technical Specification 4.7.10 shall be followed.

The proposed alternative stated above ensures that the overall level of plant quality and safety will not be, nor has been compromised. This relief request is only applicable to the snubber functional testing performed during the Spring 2000 refueling outage.

Virginia Electric and Power Company  
(Dominion)  
North Anna Power Station, Unit 1  
Third Ten Year Interval

Relief Request CS-3

I. Identification of Components:

Class 1, 2, and 3 Snubbers

II. Code Requirement:

The ASME Code, Section XI, 1989 Edition, paragraphs IWF-5200 (b) and IWF-5300 (b) require the use of the ASME/ANSI OM-1987, Part 4 (published in 1988) Code to perform the preservice and inservice tests of Class 1, 2, and 3 Snubbers.

III. Basis for Relief:

Integration of Section XI and OM (or alternatively ISTD) Codes into an effective coherent testing program along with associated required changes to the Technical Specifications would require a significant amount of administrative activity (e.g., administrative procedure changes, reconciliation of Code requirement differences, technical procedure changes, etc.). These actions are considered a hardship given there is no commensurate increase in safety due to such integration.

An alternative approach to establish these administrative requirements for functional testing would be to revise the Technical Specifications to reference the appropriate paragraphs of the OM or ISTD document. However, many of the requirements being removed from the existing Technical Specifications would be very similar, if not identical to the requirements being added. Again, this results in a significant amount of administrative activity, without enhancement in quality and safety. A third approach, which is proposed, provides a means to accomplish the examination and testing required by the Code and regulation with a minimum of burden.

The current testing requirements of Technical Specification 3/4.7.10 formed the basis of the North Anna Unit 1 inservice testing program for snubbers for the past ISI interval (2<sup>nd</sup> interval). Virginia Electric and Power Company (Dominion) continues to believe that the current Technical Specification 3/4.7.10 functional testing requirements provides an acceptable level of quality and safety for inservice testing of snubbers. Additionally, the continued implementation of a

program based on Technical Specifications requires no administrative program change or Technical Specification changes.

However, to comply with the preservice testing requirements of the Code verbatim, additional testing activity is required beyond the above proposal for inservice activities. Therefore, Dominion proposes that the inclusion of the testing requirements contained in paragraph ISTD 5, "Preservice Operability Testing" into the current snubber surveillance program provides an alternative with an acceptable level of safety and quality for the preservice testing requirements. The inclusion of these requirements into the snubber surveillance program achieves the preservice inspection requirements of the Code with only small administrative impact. No other requirements of ISTD will be implemented as part of this alternative.

#### IV. Proposed Alternate Requirements:

Dominion proposes as an alternative to the Code requirements stated in Section II, a snubber testing program comprised of the following elements:

- 1) The preservice testing requirements of ISTD (ASME OMa 1996, Section IST) paragraph ISTD 5, "Preservice Operability Testing", and
- 2) The continued implementation of the surveillance requirements of Technical Specification 3/4.7.10, "Snubbers", without change, and

No other requirements of IST Code will be implemented as part of this alternative for snubber testing.

Dominion submits that the proposed alternative snubber testing program provides an acceptable level of quality and safety without the burden of substantial administrative changes to comply with Code requirements that add little or no value to quality or safety. Therefore, having met the criteria of 10CFR50.55a (a) (3) (i), an authorization to implement the alternative is requested for the remaining part of the third inspection interval.

Attachment 2

Relief Requests CS-2 and CS-3  
for Snubber Testing

Virginia Electric and Power Company  
(Dominion)  
North Anna Power Station Unit 2

Virginia Electric and Power Company  
North Anna Power Station Unit 2  
Second Ten Year Interval

RELIEF REQUEST CS-2

I. Identification of Components:

Class 1, 2, and 3 Snubbers

II. Code Requirement:

Code requirements of Section XI of the ASME Boiler and Pressure Vessel Code, 1986 Edition, IWF-5000 on the snubbers identified above, and the associated snubber testing review performed by the Authorized Nuclear Inservice Inspector (ANII) in IWA-2110.

III. Basis for Relief:

The Final Rulemaking in the Federal Register (FR) dated November 22, 1999 endorsed the 1995 ASME Section XI through the 1996 Addenda for use by licensees performing 10-year updates. Within the discussion, references were made that the new rules, as well as the old, required the testing of snubbers per ASME Section XI, IWF-5000. This discussion acknowledged that previous Federal Register Rulemaking discussions (reference 62FR 63903; December 3, 1997) on snubber testing may have been confusing with regard to the applicability of 10CFR50.55a and snubber testing. The discussion in the earlier FR notice (1997) appeared to direct licensees to Technical Specifications for testing requirements of snubbers. Regardless, the discussion in the 1999 notice directs licensees to follow the requirements of IWF-5000 noting that the requirement has been in effect since 1978.

North Anna Unit 2 is currently completing second interval requirements using the 1 year extension allowed by the Code (Interval dates 12/14/90 to 12/14/00). The snubber testing program was developed assuming that snubbers were required to be functionally tested in accordance with Technical Specifications and not with the ASME Section XI Code, IWF-5000. The assumption was based upon previous interpretations of the Federal Register Rulemaking discussion (reference 57FR34666, August 6, 1992) which explicitly states that 10 CFR 50.55a does not specify requirements for the testing of snubbers. The FR notice states that requirements for the testing of snubbers are generally governed by plant Technical Specifications. This position was consistent with conversations with other Code participants at the time of the program development. As such,

the North Anna ISI Program NRC Submittal for the second ten-year interval only states that the testing of snubbers will be developed in accordance with plant Technical Specifications. No relief request from Section XI, Subsection IWF-5000 was developed at the time, as none was thought necessary.

The North Anna Unit 2, Class 1, 2, and 3 snubbers have been functionally tested as required by plant Technical Specification 4.7.10. Technical differences between the Code and Technical Specification requirements are minor (e.g., size of sample populations, Technical Specifications has a larger initial sample for testing, additional examination requirements as a result of failures are different, but accomplish the same purpose), and the testing being performed continued to assure component operability. Testing results were reviewed as required by the quality assurance program, however there was no ANII involvement since none was necessary.

Given the direct reference to IWF-5000 in the 1999 Federal Register notice, a Code relief request is necessary to close out the interval for North Anna Unit 2 using only the Technical Specifications functional testing requirements as the sole applicable requirement. Title 10CFR50.55a(g)(5)(iv) allows submittal of relief requests for impractical requirements within a year following the end of the interval. Since no IWF-5000 snubber testing has been performed over the interval and the interval time period is complete, completion of the Code requirements referenced are considered impractical and relief is requested per 10 CFR 50.55a(g)(5)(iv).

#### IV. Proposed Alternate Requirements:

In lieu of the Code requirements specified in IWF-5000 for snubber inservice testing and IWA-2110 concerning the ANII review of snubber testing results, the functional testing requirements of North Anna Technical Specification 4.7.10 shall be followed.

The proposed alternative testing identified above ensures that the overall level of plant quality and safety has not been compromised for the second inspection interval.

Virginia Electric and Power Company  
North Anna Power Station Unit 2  
Second Ten Year Interval

RELIEF REQUEST CS-3

I. Identification of Components:

Class 1, 2, and 3 Snubbers

II. Code Requirement:

Replacement of snubbers and snubber component parts shall meet the requirements of ASME Section XI, 1986 Edition, Article IWA-7000, and IWA-2110 with regard to duties of the Inspector.

III. Basis for Relief:

As a result of independent audit, a discrepancy was identified in the North Anna Unit 2 ASME Section XI, Repair and Replacement Program concerning the replacement of snubbers for the purpose of functional testing. The problem identified is associated with a misinterpretation of Code requirements by both the plant and the Authorized Inspection Agency. The discrepancy has been reported as a plant issue (N-2001-0518), and requires the submittal of this relief request to close out interval requirements.

Near the start of the second inspection interval (Interval dates 12/14/90 to 12/14/00) an interpretation was agreed to between the Authorized Inspection Agency and the plant regarding snubber change-outs for testing purposes. The snubber change-outs were being treated as a maintenance activity. Since it was treated as a maintenance activity, it was considered not under the jurisdiction of the ASME Section XI Repair and Replacement Program. Therefore, no repair or replacements were performed to ASME Section XI for these snubber activities. The agreement limited ASME Section XI repair and replacements to new snubbers coming into the plant population and snubber failures requiring repair or replacement. Snubber tracking, seal life monitoring, functional testing, and visual examinations were all administered and maintained by complying with the plant Technical Specifications.

Recently, the Authorized Inspection Agency reversed its position noting that ASME XI Code Case N-508-1, "Rotation of Serviced Snubbers and Pressure Relief Valves for the Purpose of Testing," approved May 11, 1994, provided alternative rules to IWA-7000 for snubber and relief valve replacements. As the

Code Case addressed the activities considered previously as maintenance, the previous interpretation was considered in error and a relief request would be necessary to use Code Case N-508-1 or similar alternative to the Code repair and replacement requirements for interval close-out.

As many as 90 snubbers have been changed-out to facilitate snubber testing during a given refueling outage. Typically the snubber is changed-out with a previously tested equivalent snubber on the maintenance shelf, while testing is performed on the removed snubber. The practice is considered very efficient with minimized outage impact. A comparison of previous plant practices to the requirements of Code Case N-508-1 identifies substantial agreement.

- a) Items removed and installed were of the same design and construction, or a repair and replacement program was initiated;
- b) Items removed had no evidence of failure at the time of removal, or a repair and replacement program was initiated;
- c) Items rotated were removed and installed only by mechanical means, or a repair and replacement program was initiated;
- d) Items installed were previously in service, or a repair and replacement program was initiated;
- e) Preservice inspections were performed in accordance with visual procedures that met plant Technical Specification acceptance criteria using a VT-3 qualified examiner. The Code Case requirement to perform preservice examinations following hot functional or power ascension tests (IWF-2200(b)) is different, however the plant performed an examination after installation and subsequent Technical Specification visual examinations of snubbers are performed at least every other refueling outage;
- f) The snubbers are tracked to ensure traceability of inspection and testing records;
- g) No NIS-2 documentation was completed unless a repair or replacement was required as previously discussed;
- h) Testing of snubbers including expansion was in accordance with Technical Specifications;
- i) Code repair and replacement requirements were followed for new snubbers and snubber failures in accordance with the 1986 Edition of ASME Section XI.

The services of the Authorized Nuclear Inservice Inspector (ANII) to review the Code Case requirements, including testing and preservice examination requirements, would be expected as part of the Code Case implementation. As this activity was considered maintenance, no ANII involvement was obtained. However, the activities were performed in accordance with the plant's quality assurance, Appendix B Program. Since this relief addresses historical or retrospective performance without remedy, compliance with the Code requirements at this time is considered impractical and relief is necessary.

#### IV. Proposed Alternate Requirements

The requirements specified in Code Case N-508-1 be authorized per 10 CFR 50.55a(g)(5)(iv) as an alternative with the following exceptions during the second inspection interval:

- 1) Preservice inspection and testing shall meet Technical Specification testing requirements, and Technical Specification visual inspection requirements using a qualified VT-3 examiner, and
- 2) ANII duties associated with the Code Case shall be waived for these snubber activities.