

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

June 24, 2010

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

Serial No. 10-007B
NL&OS/ETS R1
Docket No. 50-339
License No. NPF-7

VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)
NORTH ANNA POWER STATION UNIT 2
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
RELIEF REQUEST N2-I4-CS-001
FOURTH INTERVAL INSERVICE INSPECTION PLAN

In a letter dated February 1, 2010 (Serial No. 10-007), Dominion submitted the North Anna Power Station, Unit 2, Inservice Inspection (ISI) Plan for the fourth ISI interval, which is applicable to Class 1, 2, and 3, components and component supports. The ISI Plan describes the programmatic aspects of ISI examinations of components and component supports. North Anna Unit 2 was not designed or licensed to standards that completely meet the detailed ISI examination and system pressure test requirements presently specified in the 2004 ASME Code. Therefore, pursuant to 10 CFR 50.55a (a)(3)(i) and/or (ii) and 10 CFR 50.55a(g)(5)(iv), Dominion requested relief and/or the use of alternative examination or testing requirements in place of certain examination or testing requirements of the 2004 ASME Code. In a June 1, 2010, e-mail from Dr. V. Sreenivas the NRC requested additional information regarding relief request N2-I4-CS-001. Information to address the NRC concerns is included in the attachment to this letter.

Dominion continues to request review and approval of the relief requests by December 1, 2010, in order to implement the Plan at the start of the fourth ISI interval.

If you have any questions or require additional information, please contact Mr. Thomas Shaub at (804) 273-2763.

Respectfully,



L. N. Hartz
Vice President – Nuclear Support Services

Commitments made in this letter: None

Attachment: Response to Request for Additional Information for North Anna Power Station - Relief Request N2-I4-CS-001

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Attachment

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
RELIEF REQUEST N2-I4-CS-001

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

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
NORTH ANNA POWER STATION UNIT 2
RELIEF REQUEST N2-I4-CS-001 (TAC NO. ME3292)

Background

By letter dated February 1, 2010 (Agencywide Documents Access & Management System (ADAMS) Accession No. ML100330125), Virginia Electric and Power Company, (Dominion) requested a Request for Relief (RR), N2-I4-CS-001, for the Fourth 10-Year Inservice Inspection Interval at North Anna Power Station, Unit 2 (NAPS 2). This relief request was submitted under Title 10 of the Code of Federal Regulations (10 CFR) 50.55a(a)(3)(ii) due to the hardship of satisfying the relevant requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI for the specified ASME Code Class 1 and 2 components. In a June 1, 2010, e-mail from Dr. V. Sreenivas, the NRC requested additional information regarding relief request N2-I4-CS-001.

The ASME Code of record for the NAPS 2 Fourth 10-Year Interval ISI Program is the 2004 Edition of the ASME Code, Section XI with no Addenda.

Request for Additional Information

NRC Question 1:

The submitted Relief Request, Section 4, Reason for Request, page 3-7, Visual Inspection, third paragraph states "Historically, the number of unacceptable visual snubber inspections at NAPS Unit 2 is one or less and based on the snubber population, the current inspection interval is 48 months (every other refueling outage). Please explain:

- (1) What is the meaning of less than one unacceptable snubber during visual inspection (snubber inspection cannot be counted less than one)?
- (2) What method of categorizing (small bore, large bore or combined one population) snubbers is being used while performing visual inspections at NAPS 2?

Dominion Response:

- (1) In the context of the submittal, "less than one" equals zero unacceptable visual snubber during those inspections. There have been unacceptable snubbers identified during previous inspections. However, the statement was made to provide perspective on the number of snubber failures routinely identified during the periodic inspections.
- (2) The safety-related small bore snubbers in Unit 2 are grouped into one inaccessible population. We group the twelve (12) Unit 2 large bore snubbers into a separate inaccessible population.

NRC Question 2:

OM Part 4 requires NAPS 2 to use a 10% test plan, 37 snubber test plan or 55 snubber test plan. In the submitted relief request, NAPS 2 uses two different sampling plans (1) one for small bore; and (2) another for large bore snubbers. Please explain the reason and basis for using two different and separate test sampling plans for small and large bore snubbers.

Dominion Response:

The sample size for small bore (50 KIPS and less) and large bore (greater than 50 KIPS) snubbers testing comes from the NAPS Technical Requirements Manual (TRM). The small bore and large bore snubber populations are each divided into 6 functional test sample groups. One group of small bore snubbers and one group of large bore snubbers are functionally tested every refueling outage. The basis for the sample sizes in the TRM was developed to comply with NRC Generic Letter 84-13 and originally approved by the NRC on November 21, 1985 as amendment 58 to Facility Operating License No. NPF-7. This amendment revised Section 4.7.10 of the Technical Specifications to modify portions of snubber visual inspection criteria, establish separate sampling methods for functional testing of small and large bore snubbers, and establish functional test methods for large bore snubbers. This revision to the Technical Specification was later incorporated into the Technical Requirements Manual when North Anna Power Station converted to Improved Technical Specifications in April 2002.

NRC Question 3:

TRM page 3.7.5-5, second paragraph, fifth line, states "If the failure is determined to be generic, an additional 10% of that type of snubber shall be functionally tested. If the failure is determined to be non-generic, an additional 10% of that type snubber will be tested during the next functional test period." Please explain the following:

- a. Provide details about "generic" and "non-generic" failures, and provide the section number of the OM-4 Code, which is being used for this requirement.
- b. Define "functional test period," and provide justification to delay the required additional testing to the next functional test period. (Note: the Code requires that additional functional testing to be performed in the same period/interval.)

Dominion Response:

- a. As stated in Relief Request N2-I4-CS-001, a "non-generic" failure has the same definition or meaning as an "isolated" failure in OM Part 4, paragraph 1.4 entitled "Terminology". An isolated failure is "a failure of a snubber, the nature of which does not lend other snubbers to be suspect." For example, failures resulting from damage during installation or shutdown (i.e., standing on the snubber, dropping equipment or

tools on the snubber, missing pins, etc). Conversely, “generic” failures are any failures that are not isolated and could lend other snubbers to be suspect. Isolated failures are specified in OM Part 4 to be a test failure mode group in paragraph 3.2.4.2(d) and the corrective action requirements for this failure mode are specified in paragraph 3.2.5.1(b).

- b. The “functional test period” is the current refueling outage when the selected group is being tested. The “next functional test period” is the refueling outage following the current refueling outage. By definition, snubbers that are categorized as non-generic or isolated failures do not lend other snubbers to be suspect. Therefore, there would be no reason to believe that other snubbers may be affected by the failure mechanism. Thus, deferral of additional testing to the next refueling outage is justified. The ASME OM Code does not require isolated failures to be counted as unacceptable. See paragraph 3.2.5.1(b) of the ASME OM Code. The TRM requirement for testing “an additional 10% of that type snubber to be tested during the next functional test period” is not an ASME OM-4 Code requirement, but is an additional requirement of the NAPS TRM.

NRC Question 4

OM-4, Paragraph 3.2.4.2, “Test Failure Mode Group,” states that unacceptable snubber(s) shall be categorized into failure mode group(s). A test failure mode group(s) shall include all unacceptable snubbers that have a given failure mode, and all other snubbers subject to the same failure mode. Please explain whether and how these requirements will be met by using Technical Requirement Manual (TRM) 3.7.5.

Dominion Response:

Snubber failures at NAPS are not characterized into the failure mode groups defined in the ASME OM code. North Anna does characterize the failures as generic or non-generic as discussed above and failures are evaluated as part of the corrective action program to determine if: 1) the failure has the potential to affect other snubbers (extent of condition) and 2) whether the cause of the failure is from the application, maintenance practices, manufacturing defects, etc.... Thus, North Anna believes that existing methods to categorize and evaluate snubbers failures meet the intent of the OM Code without the additional administrative burden that implementing the ASME OM code in a verbatim manner would require.

NRC Question 5

The submitted Relief Request, Section 4, Reason for Request, page 3-6, second line states “The existing TRM test and examination requirements meet the intent of ASME OM Part 4 and provide an acceptable level of quality and safety.” However, this Relief Request, Section 5, Proposed Alternative and Basis for Use, page 3-13, third paragraph states “No other requirements of OM Part 4 will be implemented as part of this alternative

for snubber inservice inspection and testing. Please explain and clarify why Section 5 of this relief request states that "No other requirements of OM Part 4 will be implemented," when Section 4 states that the existing TRM meets the intent of OM Part 4.

Dominion Response:

It is our position that the examination and testing performed on safety related snubbers based on the existing TRM requirements, maintenance procedures and corrective action program provide a comprehensive program to ensure the reliable operation of these components. In some aspects, our program exceeds that required by the ASME OM code and we conclude the existing program provides an acceptable level of quality and safety. The intent of the ASME OM code is to ensure the reliable operation of the snubbers. Thus, North Anna believes that the existing snubber program accomplishes this without the additional administrative burden that implementing the ASME OM code in a verbatim manner would require. This approach was approved for North Anna Unit 1 in a June 10, 2009 letter entitled "North Anna Power Station, Unit No. 1, Fourth 10-Year Inservice Inspection and Testing Interval for Snubber Visual Examination and Functional Testing, Relief CS-001 (TAC NO. MD9957)," [ADAMS Accession No. ML 091350058].