

**VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261**

May 20, 2010

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

Serial No. 10-007A
NL&OS/ETS R0
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-NDE-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) Program 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 an April 28, 2010, e-mail from Dr. V. Sreenivas the NRC requested additional information regarding relief request N2-I4-NDE-001. The 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,



Leslie 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 N2-I4-NDE-001

cc: U.S. Nuclear Regulatory Commission
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Attachment

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
RELIEF REQUEST N2-I4-NDE-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-NDE-001 (TAC NOS. 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-NDE-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.

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.

The Vessels and Internals Integrity Branch (staff) reviewed the information submitted by the licensee, and based on this review, determined the following information was required to complete the evaluation of RR N2-I4-NDE-001.

Request for Additional Information

NRC Question 1

In the licensee's submittal dated February 1, 2010, it was stated that: "In conjunction with license renewal, Westinghouse has performed an evaluation to address the impact of operational transients for NAPS 2 to account for insurge/outsurge transients in addition to design transients in the pressurizer lower head." Provide the Westinghouse Owners Group report number, title of report, and date of report regarding the evaluation noted in your submittal dated February 01, 2010.

Dominion Response:

The WCAP number is WCAP-15607 which analyzed insurge/outsurge transients for North Anna and Surry. The title of WCAP-15607 is "Evaluation of Pressurizer Insurge/Outsurge Transients for Surry and North Anna." The WCAP was prepared in December, 2000, for license renewal as a Westinghouse proprietary class 2 document and was not a part of Westinghouse Owners Group work.

NRC Question 2

In the licensee's submittal dated February 1, 2010, the licensee noted that the surge line weld at the hot leg pipe connection will be included in augmented inspections. Are these inspections part of NAPS 2 commitment for Aging Management?

Dominion Response:

Yes, an inspection of the pressurizer surge line connection to the hot leg piping is a commitment for license renewal aging management implementation at North Anna Power Station. The weld inspections are included in the North Anna Augmented Inspection Program.

NRC Question 3

Will the licensee monitor the inspection results along with the results of planned research by the Electric Power Research Institute sponsored Materials Reliability Program used to address and assess Environmentally Assisted Fatigue for the surge nozzle?

Dominion Response:

Yes, the results for examination of the pressurizer surge line will be monitored through implementation of the North Anna Augmented Inspection Program and corrective action system, as necessary. NUREG-1801 provides various options for managing aging. Inspection is a valid approved method for monitoring potential age related degradation and may be preferred over analysis at times for validation. Dominion has elected to manage age related degradation (i.e., potential fatigue cracking) of the pressurizer surge line through inspection of the welds that connect the surge line to the hot leg in lieu of evaluation using Environmentally Assisted Fatigue Factors. These welds are a leading indicator of fatigue on the surge line, and this approach is acceptable because an evaluation using Environmentally Assisted Fatigue Factors would be used to determine if inspection is needed. In this case, Dominion has proactively included the welds that connect the surge line to the hot leg in the North Anna Augmented Inspection Program.

Dominion is an active member of the EPRI MRP and has access to research results. Thus, Dominion should remain cognizant of any developing industry trends of failure or indications in this area.

NRC Question 4

Is the licensee aware of any industry operating experience involving degradation at the inside radius section of the surge line nozzle in a Westinghouse designed pressurizer?

Dominion Response:

Dominion is unaware of any operating experience (OE) involving degradation (i.e., indications) in pressurizer nozzle inside radius (NIR) sections or for any reactor or steam generator nozzle NIRs at PWR (Pressurize Water Reactor) plants. This conclusion is based on its own OE, a search of the OE data base on the INPO website, and consultation with several industry experts.