Dominion Resources Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060

Dominion

March 8, 2004

Re: 10 CFR 2.202

Secretary, Office of the Secretary of the Commission
U.S. Nuclear Regulatory Commission
ATTN: Rulemakings and Adjudications Staff
Washington, D.C. 20555-0001

Serial No.: 04-119
NL&OS/ETS R0
Docket Nos.: 50-338/339
50-280/281
50-336
50-423
License Nos.:NPF-4/7
DPR-32/37
DPR-65
NPF-49

VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)
DOMINION NUCLEAR CONNECTICUT, INC. (DNC)
NORTH ANNA POWER STATION UNITS 1 AND 2
SURRY POWER STATION UNITS 1 AND 2
MILLSTONE POWER STATION UNITS 2 AND 3
ANSWER TO REVISED ORDER FOR INTERIM INSPECTION REQUIREMENTS FOR REACTOR PRESSURE VESSEL HEADS AT PRESSURIZED WATER REACTORS DATED FEBRUARY 20, 2004

On February 20, 2004, the Nuclear Regulatory Commission (NRC) issued the First Revision to NRC Order (EA03-009) Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors licensees. The revised order modified the specific inspection requirements for the reactor pressure vessel (RPV) head and associated penetration nozzles. Specifically, the revised order addresses revisions to bare metal visual inspections, penetration nozzles inspection coverage, flexibility in combination of non-destructive examination methods, flaw evaluation, and requirements for plants that have replaced their RPV heads

In accordance with Section V of the Order and 10 CFR 2.202, Dominion and DNC hereby submit their answer to the revised Order. Dominion and DNC consent to the Order as described in Section IV and do not request a hearing.

Thermal sleeves are installed in the RPV head penetration nozzles in Surry Units 1 and 2, North Anna Units 1 and 2, and Millstone Unit 3. These thermal sleeves could preclude 100 percent inspection coverage of the penetration nozzle base material in the area of the J-groove weld as required by Section IV.C.5(b) of the Order. The thermal sleeves installed in the Surry and North Anna replacement RPV heads were designed to reduce the possible interferences associated with ultrasonic or eddy current examination of the inside diameter of the penetrations. Since, Millstone Unit 3 is in the low susceptibility category, nonvisual NDE of the RPV head penetrations has not been performed and therefore, the potential for inspection interferences is not definitively known at this time.

The North Anna Units 1 and 2 and Surry Unit 1 heads have four penetrations per head with threads at the bottom outside ends to receive a guide funnel. The majority of the

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remaining penetrations have an ID taper at their bottom ends, which depending on the location, extends up to the J-groove weld. These design features may present some challenges to achieving the inspection coverage required by the revised order. The Surry Unit 2 head penetrations have a short threaded section at the bottom inside of the penetration. This feature was initially intended for guide funnels when it was believed that the penetrations would be supplied without thermal sleeves. These threads at the bottom of the penetrations may present challenges to achieving the inspection coverage required by the revised order.

Millstone Unit 2 RPV head penetrations also have a short threaded section at the bottom inside of the penetration to receive guide funnels. The penetrations' internal threads have prohibited coverage as required by the Order (EA 03-009) and are/were the subject of a relaxation request submitted October 3, 2003 (Serial No. 03-513). Results of the nonvisual NDE of the Millstone Unit 2 RPV head penetration is documented in a letter to the staff dated January 23, 2004 (Serial No. 04-044). The Millstone Unit 2 replacement RPV head is being designed to reduce possible interferences. The Millstone Unit 2 RPV head is currently scheduled for replacement during the next refueling outage (Spring 2005). The penetrations in the replacement head are of the same design as the current head, i.e., threaded for funnels on the ends. The extent to which the threaded funnels will interfere with achieving the inspection coverage required by the revised order will not be known until the replacement RPV head is completed.

The Millstone Unit 3 RPV head penetrations have thermal sleeves. These thermal sleeves are centered in the penetration with three pads spaced 120° apart. The location of these pads is within the inspection area of interest so there will be challenges in achieving the inspection coverage required by the revised order.

Until the first inspections required by the revised order are performed, the exact limitation on the required coverage cannot be established. If 100 percent coverage of the area of interest cannot be obtained during inspection of the penetration nozzles for any of the interferences noted above, Dominion and/or DNC will seek relaxation from the inspection requirements in Section IV.C.5(b) of the Order at that time.

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

Very truly yours,

David A. Christian
Senior Vice President – Nuclear Operations and Chief Nuclear Officer
Virginia Electric and Power Company
Dominion Nuclear Connecticut, Inc.

Commitments made in this letter: None

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

Mr. James Dyer, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Assistant General Counsel for Materials Litigation and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

U. S. Nuclear Regulatory Commission
Regional Administrator - Region II
Sam Nunn Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, GA 30303

Mr. H. J. Miller, Region I Administrator
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

Mr. S. R. Monarque
NRC Project Manager
North Anna and Surry Power Stations

Mr. M. T. Widmann
NRC Senior Resident Inspector
North Anna Power Station

Mr. G. J. McCoy
NRC Senior Resident Inspector
Surry Power Station

Mr. V. Nerses
NRC Senior Project Manager
Millstone Power Station Units 2 and 3

Mr. S. M. Schneider
NRC Senior Resident Inspector
Millstone Power Station

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Subject: Response to Revised Order for RPV Head and Penetration Nozzles Inspection

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by David A. Christian who is Senior Vice President – Nuclear Operations and Chief Nuclear Officer of Virginia Electric and Power Company and Dominion Nuclear Connecticut Inc. He has affirmed before me that he is duly authorized to execute and file the foregoing document in behalf of that Company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 8th day of March, 2004.

My Commission Expires: 3/31/08.

Maggie McClure
Notary Public

(SEAL)