VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

Re: 10 CFR 2.202

December 5, 2003

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Serial No.: 03-571
NL&OS/ETS
Docket No.: 50-338
License No.: NPF-4

VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)
NORTH ANNA POWER STATION UNIT 1
ORDER FOR INTERIM INSPECTION REQUIREMENTS FOR REACTOR PRESSURE VESSEL HEADS AT PRESSURIZED WATER REACTORS
PRESERVICE INSPECTION OF REPLACEMENT REACTOR PRESSURE VESSEL HEAD AND PRESSURE RETAINING COMPONENTS ABOVE THE RPV HEAD

On February 11, 2003, the Nuclear Regulatory Commission (NRC) issued an Order for Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactor licensees. The Order requires specific inspection of the reactor pressure vessel (RPV) head and associated penetration nozzles at pressurized water reactors (PWRs). The Commission stated that the actions in the Order are interim measures that are necessary to ensure that licensees implement and maintain appropriate measures to inspect and, as necessary, repair RPV heads and associated penetration nozzles. The Order required that licensees immediately start implementation of the requirements of the Order and report the results of the required inspections. As required by Section IV.E of the Order, Virginia Electric and Power Company (Dominion) is providing the results of the preservice inspection of the North Anna Unit 1 replacement RPV head and pressure retaining components above the RPV head.

During the 2003 refueling outage, the North Anna Unit 1 reactor vessel head was replaced. Prior to the replacement, the new heads were inspected to satisfy ASME Section XI requirements for pre-service inspection and to establish a baseline for future anticipated inspections required by ASME Code or that might be required by future regulation. The inspections conducted for the ASME Code preservice requirement included ultrasonic (UT) and magnetic particle (MT) examination of the head dome to flange weld and liquid penetrant (LP) examination of the control rod drive mechanism (CRDM) housing to CRDM adapter welds. In addition, non-Code required examinations were preformed on the RPV head. Each CRDM housing to head weld was LP inspected and each CRDM housing was UT inspected from the bottom of the housing to above the top surface of the head (at least 2 inches above the housing to head weld). Furthermore, each CRDM housing to CRDM adapter weld was UT inspected. No

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relevant indications were noted. These examinations comply with and exceed the requirements of the NRC Order (EA-03-009).

A bare-metal visual examination was performed on the North Anna Unit 1 replacement RPV head. This examination included 100% of the surface of the head including 360° around each head penetration. The replacement head and the pressure-retaining components above the RPV head were clean and free of any evidence of corrosion, boric acid residue, or any other condition that could either interfere with any future bare-metal visual examination or complicate the interpretation of the results of a future bare-metal visual examination. Consequently, we conclude that we are in compliance with the Order (EA-03-009) relative to the initial bare-metal visual inspections for North Anna Unit 1.

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

Very truly yours,

Leslie N. Hartz
Vice President – Nuclear Engineering

Commitments made in this letter: None

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

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

Mr. S. R. Monarque
NRC Project Manager
U. S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Mail Stop 8-H12
Rockville, MD 20852

Mr. J. E. Reasor, Jr.
Old Dominion Electric Cooperative
Innsbrook Corporate Center
Suite 300
4201 Dominion Blvd.
Glen Allen, VA 23060

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

SN: 03-571
Docket Nos.: 50-338
Subject: Response to RPV Head and Penetration Nozzles Inspection Order

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Leslie N. Hartz who is Vice President – Nuclear Engineering of Virginia Electric and Power Company. She has affirmed before me that she 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 her knowledge and belief.

Acknowledged before me this 5th day of December, 2003.

My Commission Expires: 3/31/04.

Maggie McCune
Notary Public

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