

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

June 13, 2002

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

Serial No. 02-334
NL&OS/GDM: R1
Docket Nos. 50-280/281
50-338/339
License Nos. DPR-32/37
NPF-4/7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
REQUEST FOR APPROVAL OF TOPICAL REPORT DOM-NAF-1
QUALIFICATION OF THE STUDSVIK CORE MANAGEMENT SYSTEM REACTOR
PHYSICS METHODS FOR APPLICATION TO NORTH ANNA AND SURRY POWER
STATIONS

As part of a continuing effort to improve core reload design methods, Virginia Electric and Power Company (Dominion) is updating its capability for performing nuclear utility reactor analyses in support of Surry and North Anna Power Stations, Units 1 and 2. The Studsvik/Core Management System (CMS) is a core modeling code package currently in wide use throughout the nuclear industry. Dominion has validated the Studsvik/CMS for use in the reload design process for North Anna and Surry. The accuracy of the Studsvik/CMS has been demonstrated through comparisons with measurements taken from over sixty cycles of operation at Surry and North Anna and through comparison with higher order Monte Carlo neutron transport calculations. The Studsvik/CMS has been shown to meet or exceed the same standards for accuracy as models currently being used by Dominion.

Therefore, Dominion is submitting Topical Report DOM-NAF-1, "Qualification of the Studsvik Core Management System Reactor Physics Methods for Application to North Anna and Surry Power Stations," provided in Attachment 1 for NRC review and approval. NRC approval is requested by January 31, 2003, to permit the use of the Studsvik/CMS code package to support the reload design analysis of Surry Unit 2, Cycle 19.

Dominion considers a portion of Topical Report DOM-NAF-1 proprietary. To conform with the requirements of 10 CFR 2.790 concerning the protection of proprietary information, the proprietary information provided in the Topical Report in Attachment 1 is contained within brackets. Where the proprietary information has been deleted in the non-proprietary version, only the brackets remain (i.e., the information that was contained within the brackets in the proprietary version has been redacted).

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Attachment 2 has been redacted to provide a non-proprietary version of Topical Report DOM-NAF-1. The basis for redacting certain information as proprietary is provided in the application for withholding and affidavit provided in Attachment 3 pursuant to 10 CFR 2.790(b)(1).

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

Very truly yours,



Leslie N. Hartz
Vice President – Nuclear Engineering

Attachment

Commitments made in this letter: None

cc: U.S. Nuclear Regulatory Commission (w/o Att)
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Mr. M. J. Morgan (w/o Att)
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North Anna Power Station

Mr. R. A. Musser (w/o Att)
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Surry Power Station