VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

November 15, 2002

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

Serial No. 02-167E
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 AND 2
REVISED LOCA ANALYSIS SCHEDULE IN SUPPORT OF
PROPOSED TECHNICAL SPECIFICATIONS CHANGES AND EXEMPTION REQUEST
TO USE FRAMATOME ANP ADVANCED MARK-BW FUEL

In a March 28, 2002 letter (Serial No. 02-167), Virginia Electric and Power Company (Dominion) requested an amendment to Facility Operating License Numbers NPF-4 and NPF-7 for North Anna Power Station Units 1 and 2, and associated exemptions from 10 CFR 50.44 and 10 CFR 50.46. The amendments and exemptions will permit North Anna Units 1 and 2 to use Framatome ANP Advanced Mark-BW fuel. This fuel design has been evaluated by Framatome and Dominion for compatibility with the resident Westinghouse fuel and for compliance with fuel design limits.

Dominion has decided, based upon recent interactions with the NRC staff, to revise the schedule for implementation of the Framatome ANP Advanced Mark-BW fuel product at North Anna. The first cycle to use Advanced Mark-BW fuel is now designated as North Anna Unit 2, Cycle 17, which is scheduled to begin operation in April 2004. To support the planned operational schedule for this cycle, we request approval of the proposed Technical Specifications changes and issuance of the necessary exemptions by September 30, 2003.

In conjunction with this change in schedule for use of the Framatome fuel product, Dominion no longer intends to pursue licensing of the Advanced Mark-BW fuel with the Framatome ANP Recirculating Steam Generator (RSG) LOCA evaluation model (Reference 1). Dominion thus withdraws the following supplements from our March 28, 2002 letter and requests that the staff cease review of these items:

- Dominion letter No. 02-167A, Minimum Containment Pressure (Reference 2)
- Dominion letter No. 02-167B, REFLOD3B Carryout Rate Fraction (Reference 3)
- Dominion letter No. 02-167D, Large Break LOCA Analysis (Reference 4)

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Likewise, it should be noted that Reference 4 is not applicable to the current fuel product at North Anna and should not be employed to draw conclusions regarding current operation or ECCS performance of the North Anna units.

Dominion will reanalyze the large break LOCA for North Anna using the Framatome ANP realistic LOCA evaluation methodology (Reference 5). This reanalysis will be conducted following NRC generic approval of the realistic analysis methodology. In Reference 6, Dominion submitted an evaluation of the transition to Advanced Mark-BW fuel on small break LOCA accidents. This assessment and its conclusions are unaffected by the large break LOCA considerations described above. Accordingly, Dominion requests that the NRC staff continue its review of the evaluation of Reference 6.

Independent of the licensing activities in direct support of fuel transition, Dominion will reanalyze the small break LOCA for North Anna in response to concerns relating to 10CFR50.46 reporting requirements that were discussed with NRC staff in an October 17, 2002 teleconference. This reanalysis will be performed no later than April 30, 2005. Our February 2, 2001 letter (Serial No. 01-047) established a commitment date of April 30, 2003 to reanalyze the North Anna large break LOCA in conjunction with the transition to Framatome ANP fuel. This reanalysis commitment remains an achievable date even for the realistic large break LOCA analysis described above.

In order to support use of Framatome Advanced Mark-BW fuel in North Anna Unit 2, Cycle 17, we request that NRC complete their review and approval of the amendment and exemptions by September 30, 2003. To support this objective, we further request a management meeting to identify information/analytical expectations and intermediate schedule milestones. We would also recommend a meeting be held at Framatome ANP-Lynchburg for NRC technical review of calculations discussed to date.

We appreciate your considerations of our technical and schedular requests. If you have any questions or require additional information, please contact us.

Very truly yours,

David A. Christian
Senior Vice President - Nuclear Operations and Chief Nuclear Officer

Commitments made in this letter:

1. Reanalyze the large break LOCA for North Anna Units 1 and 2 using the Framatome ANP realistic large break LOCA methodology, following generic approval of this methodology. Analysis to be completed by April 30, 2003.

2. Reanalyze the small break LOCA for North Anna Units 1 and 2, with the analysis to be completed by April 30, 2005.

References:

1. BAW-10168P-A, Revision 3, "RSG LOCA – BWNT Loss-of-Coolant Accident Evaluation Model for Recirculating Steam Generator Plants," December 1996.

2. Letter, L. N. Hartz to USNRC, "Virginia Electric and Power Company North Anna Power Station Units 1 and 2 – Minimum Containment Pressure Analysis to Support Proposed Technical Specifications Changes and Exemption Request Use of Framatome ANP Advanced Mark-BW Fuel," Serial No. 02-167A, July 9, 2002.

3. Letter, L. N. Hartz to USNRC, "Virginia Electric and Power Company North Anna Power Station Units 1 and 2 – REFLOD3B Code Update in Support of Proposed Technical Specifications Changes and Exemption Request to Use Framatome ANP Advanced Mark-BW Fuel," Serial No. 02-167B, July 25, 2002.

4. Letter, E. S. Grecheck to USNRC, "Virginia Electric and Power Company North Anna Power Station Units 1 and 2 – Large Break LOCA Analysis in Support of Proposed Technical Specifications Changes and Exemption Request to Use Framatome ANP Advanced Mark-BW Fuel," Serial No. 02-167D, August 16, 2002.

5. Realistic Large Break LOCA Methodology for Pressurized Water Reactors, EMF-2103(P), Revision 0, August 2001.

6. Letter, L. N. Hartz to USNRC, "Virginia Electric and Power Company North Anna Power Station Units 1 and 2 – Small Break LOCA Evaluation in Support of Proposed Technical Specifications Changes and Exemption Request Use of Framatome ANP Advanced Mark-BW Fuel," Serial No. 02-167C, August 2, 2002.

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