VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261
June 19, 2002

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

Serial No. 02-305A
NL&OS/ETS R0
Docket Nos. 50-338/-339
License Nos. NPF-4/-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 AND 2
UPDATED LOCA MODELING APPROACH FOR TRANSITION
TO FRAMATOME ANP ADVANCED MARK-BW FUEL

In a letter of May 13, 2002 (Serial No. 02-305), Virginia Electric and Power Company (Dominion) provided the NRC with a proposed modeling approach for performing large and small break LOCA analysis to support the transition to Framatome ANP Advanced Mark-BW fuel in North Anna Power Station Units 1 and 2. The proposed modeling approach was designed to facilitate the NRC's review and approval of the license amendment to use the Advanced Mark-BW fuel by January 31, 2003.

The proposed modeling approach described in the May 13, 2002, letter has been modified based on subsequent discussions between the NRC staff, Dominion and Framatome ANP. The evaluation for the small break LOCA will be conducted as described in the May 13, 2002 letter. The analysis for the large break LOCA is being modified based on those discussions. The following is a summary of the documentation that is being prepared to describe the modified analysis approach for the large break LOCA.

1) A description of the large break LOCA analysis using the evaluation model described in the May 13, 2002 letter. This description will specifically incorporate use of the following two evaluation model changes and the minimum containment pressure evaluation described in the May 13, 2002 letter:

   - BEACH Reflood Heat Transfer Modifications
   - REFLOD3B Carryout Rate Fraction
   - Minimum Containment Backpressure Calculation

2) An estimate of the impact on PCT and cladding oxidation due to modifying the large break LOCA evaluation model to account for downcomer boiling, including the effect on core cool-down and quench.

3) A schedule for reanalyzing the large break LOCA using an evaluation model that explicitly accounts for downcomer boiling. The reanalysis is expected to be

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performed using the Framatome ANP realistic large break LOCA evaluation model, which is currently being reviewed by the NRC. It is anticipated that this reanalysis will be performed in support of the second Framatome reload core for each North Anna unit, following approval of the realistic large break LOCA evaluation model.

We intend to submit the documentation of the modified analysis approach for the large break LOCA to the NRC for review by September 30, 2002. Based on previous discussions with the NRC staff, we understand that the modified approach described above for the large break LOCA analysis will allow the NRC to complete its review of the license amendment by January 31, 2003.

We would appreciate being notified if this approach or the requested schedule is not satisfactory. If you have any further questions or require additional information, please contact us.

Very truly yours,

Leslie N. Hartz
Vice President – Nuclear Engineering

Commitments made in this letter: None

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