



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 23, 2010

Mr. David A. Heacock
President and Chief Nuclear Officer
Virginia Electric and Power Company
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: NORTH ANNA POWER STATION, UNIT NOS. 1 AND 2 – SUPPLEMENTAL INFORMATION NEEDED FOR ACCEPTANCE OF REQUESTED LICENSING ACTION REGARDING AMENDMENT REQUEST- ADDITION OF ANALYTICAL METHODOLOGY TO CORE OPERATING LIMITS REPORT (COLR) (TAC NOS. ME4262 AND ME4263)

Dear Mr. Heacock:

By letter dated July 19, 2010, Virginia Electric and Power Company (the licensee) submitted a license amendments request for North Anna Power Station, Unit Nos. 1 and 2 (NAPS). This proposed amendment request would change the Technical Specifications (TSs) for the inclusion of U.S. Nuclear Regulatory Commission (NRC)-approved Appendix C of Dominion Fleet Report DOM-NAF-2-A, "Qualification of the Westinghouse WRB-2M CHF Correlation in the Dominion VIPRE-D Computer Code," to the NAPS TS 5.6.5b as a referenced analytical methodology. In addition to this amendment, the licensee also requests NRC review and approval of the implementation of the Dominion Topical Report VEP-NE-2-A, "Statistical DNBR Evaluation Methodology," for Westinghouse RFA-2 fuel using the VIPRE-D/WRB-2M code/correlation pair, and the Statistical Design Limit (SDL) for this computer code/correlation pair, since the SDL establishes a Design Basis Limit for Fission Product Barrier. The purpose of this letter is to provide the results of the NRC staff's acceptance review of this amendment request. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff's to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

Consistent with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), an amendment to the license (including the TSs) must fully describe the changes requested, and following as far as applicable, the form prescribed for original applications. Section 50.34 addresses the content of technical information required. This section stipulates that the submittal address the design and operating characteristics, unusual or novel design features, and principal safety considerations.

The NRC staff has reviewed your application and concluded that the information delineated in the enclosure to this letter is necessary to enable the staff to make an independent assessment regarding the acceptability of the proposed amendment/relief request in terms of regulatory requirements and the protection of public health and safety and the environment.

D. Heacock

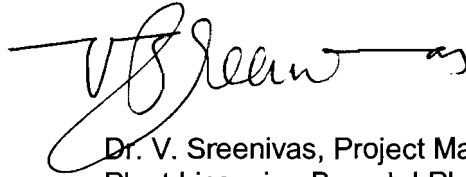
-2-

In order to make the application complete, the NRC staff requests that the licensee supplement the application to address the information requested in the enclosure by September 13, 2010. This will enable the NRC staff to begin its detailed technical review. If the information responsive to the NRC staff's request is not received by the above date, the application will not be accepted for review pursuant to 10 CFR 2.101, and the NRC will cease its review activities associated with the application. If the application is subsequently accepted for review, you will be advised of any further information needed to support the staff's detailed technical review by separate correspondence.

The information requested and associated time frame in this letter was discussed with David Sommers of your staff on August 18, 2010.

If you have any questions, please contact me at (301) 415-2597.

Sincerely,

A handwritten signature in black ink, appearing to read "V. Sreenivas", with a long horizontal flourish extending to the right.

Dr. V. Sreenivas, Project Manager
Plant Licensing Branch LPLII-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-338 and 50-339

Enclosure:
As stated

cc w/encl: Distribution via Listserv

SUPPLEMENTAL INFORMATION NEEDED
ADDITION OF ANALYTICAL METHODOLOGY TO COLR
VIRGINIA ELECTRIC AND POWER COMPANY (VEPCO)
NORTH ANNA POWER STATION, UNIT NOS. 1 AND 2
DOCKET NOS. 50-338 AND 50-339

1. What fraction of the NAPS core will be replaced with the Westinghouse RFA-2 fuel?
2. General Design Criterion (GDC) 10 of 10 CFR Appendix A as detailed in Section 4.2 of Standard Review Plan (SRP) (NUREG-0800) establishes the criteria that specified acceptable fuel design limits (SAFDLs) should not be exceeded during any condition of normal operation, including the effects of anticipated operational occurrence (AOOs). Provide information in the form of mechanical design report for the Westinghouse RFA-2 fuel that shall satisfy the criteria in Section 4.2 of the SRP.
3. Provide a plan or a discussion/analysis to satisfy the requirements of SRP Section 4.3, "Nuclear Design", that the nuclear design of the fuel assemblies, control systems, and the reactor core is performed to confirm that the SAFDLs will not be exceeded during normal operation or AOOs and that the effects of postulated reactivity accidents will not cause significant damage to the reactor coolant pressure boundary and to assure the requirements of GDC Criteria 10, 11, 20, 25, 26, 27, and 29.
4. The proposed new Westinghouse RAF-2 fuel will be co-resident with AREVA Advanced Mark-BW fuel that will have thermal and hydraulic characteristics different from the new fuel. Provide thermal-hydraulic analyses that shall demonstrate that the Westinghouse RAF-2 fuel is hydraulically compatible with the co-resident AREVA fuel in the transition core. Analyses should demonstrate the thermal-hydraulic design and compatibility criteria prescribed in SRP Section 4.3.
5. The proposed new NAPS core with Westinghouse and AREVA fuel designs will constitute a "mixed core". The licensee should provide the impact of the mixed core on the departure from nucleate boiling rate calculations to account for the differences in mechanical, thermal and hydraulic characteristics of the various fuel designs in the transition core.

D. Heacock

-2-

In order to make the application complete, the NRC staff requests that the licensee supplement the application to address the information requested in the enclosure by September 13, 2010. This will enable the NRC staff to begin its detailed technical review. If the information responsive to the NRC staff's request is not received by the above date, the application will not be accepted for review pursuant to 10 CFR 2.101, and the NRC will cease its review activities associated with the application. If the application is subsequently accepted for review, you will be advised of any further information needed to support the staff's detailed technical review by separate correspondence.

The information requested and associated time frame in this letter was discussed with David Sommers of your staff on August 18, 2010.

If you have any questions, please contact me at (301) 415-2597.

Sincerely,

/RA/

Dr. V. Sreenivas, Project Manager
Plant Licensing Branch LPLII-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/encl: Distribution via Listserv

DISTRIBUTION:

PUBLIC

Branch Reading File

RidsAcrsAcnw_MailCTR Resource

RidsNrrSNPB Resource

RidsNrrDorl Resource

RidsNrrDorlDpr Resource

RidsNrrDorlLpl2-1 Resource

RidsNrrLAMOBrian Resource

RidsNrrPMVSreenivas Resource

RidsOgcRp Resource

RidsRgn2MailCenter Resource

ADAMS Accession No. ML102310163

OFFICE	DORL/LPL2-1/PM	DORL/LPL2-1/LA	DSS/SNPBBC	DORL/LPL2-1/BC	DORL/LPL2-1/PM
NAME	VSreenivas	MO'Brien	AMendiola	GKulesa	VSreenivas
DATE	08/18/10	08/18/10	08/16/2010	08/23/10	08/19/10

OFFICIAL RECORD COPY