

June 5, 2008

Mr. Eugene S. Grecheck
Vice President - Nuclear Development
Dominion
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 006 (SRP
SECTIONS 06.02.01, 06.02.04, 10.03.06 AND 14.02) RELATED TO THE NORTH
ANNA UNIT 3 COMBINED LICENSE APPLICATION

Dear Mr. Grecheck:

By letter dated November 26, 2007, Dominion Virginia Power (Dominion) submitted a combined license application for North Anna Unit 3 pursuant to 10 CFR Part 52. The U. S. Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this application.

The staff has identified that additional information is needed to continue portions of the review and the request for additional information (RAI) is contained in the enclosure to this letter. To support the review schedule, Dominion is requested to respond within 45 days of the date of this letter. If the RAI response involves changes to application documentation, Dominion is requested to include the associated revised documentation with the response.

Should you have questions, please contact me at (301) 415-0224 or Thomas.Kevern@nrc.gov.

Sincerely,

/RA/

Thomas A. Kevern, Senior Project Manager
ESBWR/ABWR Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket No. 52-017

Enclosure:
Request for Additional Information

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DATE	04/04/08	04/11/08	05/19/08	06/05/08	06/05/08
OFFICE	TR:EEB	BC:EEB	PM:DNRL:NGE1	OGC	LPM:DNRL:NGE1
NAME	APal*	DCurtis*	LPerkins*	TKevern for RWeisman*	TKevern *
DATE	04/17/08	04/17/08	05/20/08	06/04/08	06/05/08
OFFICE	TR:SBCV	BC:SBCV	PM:DNRL:NGE1	OGC	LPM:DNRL:NGE1
NAME	ADvir *	MSnodderly*	TTai*	TKevern for RWeisman*	TKevern*
DATE	05/20/08	05/20/08	05/20/08	06/04/08	06/05/08

*Approval captured electronically in the electronic RAI system.

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Request for Additional Information
North Anna, Unit 3
Dominion
Docket Number 52-017
SRP Sections: 06.02.01, 06.02.04, 10.03.06 and 14.02
Application Section: FSAR 6.2.1.6, 6.2, 6.6, and 14.2.9

QUESTIONS

06.02.01-1 SRP Section: 06.02.01 - Containment Functional Design

FSAR Chapter 6 STD SUP 6.2-1, Inspection to Limit Debris, identifies procedures of activities necessary to prevent debris affecting the emergency core cooling and long-term cooling safety functions in accordance with Regulatory Guide 1.82, Revision 3. The discussion does not include procedures to control the effects of permanent plant changes inside the containment and maintenance activities on the assumptions used in designing debris strainers and conclusions. Please "fully describe" the procedures related to debris strainers.

Note that the Commission defined "fully described" in a May 14, 2004, SRM for SECY-04-0032, "Programmatic Information Needed for Approval of a Combined License Application Without Inspections, Tests, Analyses, and Acceptance Criteria." In addition, the Revised Content Guide for Generic Letter 2004-02: Supplemental Responses, dated November 2007 (ADAMS Accession No. ML073110278) provides guidance to pressurized water reactor licensees on programmatic controls that will ensure that potential sources of debris introduced into containment (e.g., insulations, signs, coatings, and foreign materials) will be assessed for potential adverse effects on the emergency core cooling system and containment spray system recirculation functions. While this document is strictly applicable to PWRs, the principles underlying the items quoted apply to BWRs attempting to address the guidance in RG 1.82, Revision 3.

Please provide the following:

- A summary of the containment housekeeping programmatic controls that will be in place to control or reduce the latent debris burden. Specifically, provide a description of programmatic controls that will be used to maintain the latent debris source term to ensure assumptions used in designing debris strainers and conclusions remain valid.
- A summary of the foreign material exclusion programmatic controls that will be in place to control the introduction of foreign material into the containment.
- A description of how permanent plant changes inside containment are programmatically controlled so as to not change the analytical assumptions and numerical inputs of the analyses performed for designing debris strainers.
- A description of how maintenance activities including associated temporary changes are assessed and managed.

06.02.04-1 SRP Section: 06.02.04 - Containment Isolation System

In Section 6.2.8, the applicant identified that its response to COL Item No. 6.2-1-H, as discussed in Section 6.2.8 of the ESBWR DCD, is provided in Section 6.2.4.2. The applicant identified in Section 6.2.4.2 that the required information on pipe length between containment and the

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containment isolation valves will be provided in an update to the FSAR. In addition, the applicant identified the information on pipe lengths will be determined as part of the completion of the piping design ITAAC identified in DCD Tier 1, Table 3.1-1. Because the piping design is not yet complete and the applicant proposed providing the necessary information in an update to the FSAR, the staff presumes that the applicant intends on providing this information following issuance of the combined license when the piping design is completed. The staff is unable to make its finding with respect to compliance with GDCs 55, 56, and 57 for this COL application without this information. Therefore, the staff requests that the COL applicant propose an alternative and timelier approach to providing the pipe length information to demonstrate compliance with GDCs 55, 56, and 57.

10.03.06-1 SRP Section: 10.03.06 - Steam and Feedwater System Materials

FSAR Section 6.6, Preservice and Inservice Inspection and Testing of Class 2 and 3 Components and Piping, identifies that this section is incorporated by reference from the ESBWR DCD. For the detailed flow-accelerated corrosion (FAC) program described under "Erosion-Corrosion" in Section 6.6.7, Augmented Inservice Inspections, please discuss the implementation schedule. To ensure that the FAC concerns addressed in NRC Generic Letter 89-08 are addressed, please include discussion of the activities of the FAC program that will be conducted during the construction phase and the schedule for those activities.

10.03.06-2 SRP Section: 10.03.06 - Steam and Feedwater System Materials

To ensure that an effective, long-term FAC monitoring program is in place to address the concerns discussed in NRC Generic Letter 89-08, please confirm: (1) the program for erosion/corrosion and FAC monitoring will include preservice thickness measurements of as-built components considered susceptible to FAC, and (2) these measurements will use grid locations and measurement methods most likely to be used for inservice inspection according to industry guidelines. In addition, please describe how these concerns are addressed. Note that due to factors such as variances in wall thickness during pipe fabrication and wall thinning due to bending, preservice measurements of the components are needed to accurately detect and assess inservice degradation. Complications resulting from a lack of baseline thickness information are discussed in EPRI NSAC-202L-R2, the industry guideline document referenced in SRP Section 10.3.6.

14.02-1 SRP Section: 14.02 - Initial Plant Test Program - Design Certification and New License Applicants

FSAR Section 14.2.9.1.4 states that "Performance is observed and recorded during a series of individual component and integrated system tests to demonstrate the following: (1) Proper operation of initiating, transfer, and trip devices (2) Proper operation of relaying and logic (3) Proper operation of equipment protective devices, including permissive and prohibit interlocks (4) Proper operation of instrumentation and alarms used to monitor system and equipment status (5) Proper operation and load carrying capability of breakers, switchgear, transformers, and cables (6) The capability of transfer between onsite and offsite power sources as per design."

Please address the following additional items or provide justification for exclusion:
(a) Availability of alternating current (ac) and direct current (dc) power to the switchyard equipment is verified (b) Design limits of switchyard voltages and stability are verified and Switchyard Interface Agreement and Protocols are verified (c) Operation of current transformers and potential transformers is verified (d) Operation of high voltage disconnect switches and ground switches is verified and (e) Proper operation of the automatic transfer capability of normal preferred power source to the alternate preferred power source is verified.