August 6, 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. 023 (SRP SECTIONS: 03.02.01 AND 03.02.02) 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 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

August 6, 2008

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Vice President - Nuclear Development
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Docket No. 52-017
Enclosure: Request for Additional Information
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ADAMS Accession No.: ML082190780

OFFICE	TR: EMB2	BC: EMB2	PM:DNRL:NGE1	PM:DNRL:NGE1
NAME	RMcNally*	JDixon-Herrity*	CPatel*	TKevern *
DATE	07/10/08	07/11/08	07/25/08	08/06/08

*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: 03.02.01 - Seismic Classification;
03.02.02 - System Quality Group Classification
Application: FSAR Sections 3.2.1, 3.2.2

QUESTIONS

03.02.01-1

DCD Revision 4 Table 3.2-1 identifies various nonsafety-related potential RTNSS important SSCs as either Seismic II or NS. It is not clear if any of these potential RTNSS SSCs are considered site-specific. DCD Subsection 19A.8.3 identifies RTNSS Criterion B SSCs are as a minimum Seismic Category II and such equipment are qualified to IEEE-344-1987 and must be available following the seismic event. For any site-specific RTNSS important SSCs that are required to withstand the effects of earthquakes and are to be qualified to IEEE-344, clarify the basis for the Seismic II or NS classification or identify an appropriate departure.

03.02.01-2

ESBWR DCD Subsection 3.2.1 (Revision 5) identifies Table 19A-1 for a list of RTNSS SSCs; however, Revision 5 deleted Table 19A-1 and the list of site-specific SSCs is not clearly identified. Please identify the appropriate reference for the list of site-specific RTNSS SSCs.

03.02.01-3

FSAR Subsection 3.2 does not identify any departures or supplements relative to seismic classification identified in the DCD and conformance with RG 1.29 Revision 3 in the DCD, but FSAR Table 1.9-202 references conformance with Revision 4 dated 3/07. QA program AR-NA-30 references RG 1.29 Revision 3 dated September 1978 rather than Revision 4 dated January 2007. Please clarify the extent that site-specific seismic classifications of SSCs are consistent with RG 1.29 Revision 4.

03.02.01-4

Staff review indicates that it is not clear in either the DCD or the FSAR how 10 CFR 50 Appendix B is applied to seismic Category II SSCs, including those that may be site-specific. FSAR Table 1.9-202 identifies conformance with RG 1.29, however, Seismic Category II SSCs are not designated as QA B in either the DCD or FSAR. DCD subsection 17.3 identifies that the COL applicant will address its QA program, but it is not clear how the quality assurance program will include provisions for seismic Category II structures, systems and components (SSCs). Please clarify the extent that pertinent quality assurance requirements of Appendix B to 10 CFR Part 50 in Regulatory Position C.4 of RG 1.29 apply to those activities affecting the safety-related functions of those portions of SSCs covered under Regulatory Positions 2 and 3 of RG 1.29, including any site-specific SSCs. This concern was also identified in an RAI for the ESBWR design

certification review and a special class was designated for important nonsafety-related SSCs, but SSCs that are designated as special class are not identified for review at this time. If this issue will be resolved in the DCD rather than the COL for all plant SSCs, including those that are site-specific, so advise.

03.02.01-5

DCD Section 1 identifies only limited site-specific SSCs that are outside the scope of the DCD and the COL applicant is expected to provide site-specific information. FSAR Table 1.9-203 identifies there are no safety-related or RTNSS SSCs not included in the DCD, but it is not clear if there are any other nonsafety-related SSCs that are considered important to safety and are not included in the DCD that are to be addressed in the FSAR. Please clarify if there are any site-specific SSCs outside the scope of the DCD that are not included in DCD Table 3.2-1 and are to be seismically classified in the COLA. For example, site-specific structures such as the stack and miscellaneous items such as reactor vessel insulation, that may or may not be site specific, are not included in the tables. If so, the applicant is requested to identify the appropriate seismic classification of such SSCs or clarify when these SSCs will be classified.

03.02.01-6

General Design Criterion 2 identifies, in part, that structures, systems and components <u>important to safety</u> shall be designed to withstand the effects of earthquakes. FSAR Subsection 3.2.1 identifies no departures or supplements relative to the seismic classification of structures, systems or components and the standardization matrix identifies no site-specific information applies to Section 3.2. However, certain potential RTNSS important SSCs such as PSWS and MWS are identified as site-specific and makeup sources to the ultimate heat sink are identified as a COL item. Also, it is not clear if there are any nonsafety-related SSCs outside the scope of the DCD that may be important to safety. Please clarify if there are any site-specific nonsafety-related SSCs outside the scope of the DCD that are important to safety and identify the appropriate seismic classification of such SSCs. For example, certain site-specific defense in depth RTNSS SSCs such as the PSWS and the intake structure may be considered nonsafety-related, but may be important to safety and should be categorized such that they are designed to withstand the effects of earthquakes. This seismic concern for RTNSS SSCs has also been identified during the concurrent ESBWR design certification review. If this issue will be resolved in the DCD rather than the COL for all plant SSCs, including those that are site-specific, so advise.

03.02.02-1

FSAR Subsection 3.2 does not identify any departures or supplements relative to quality group classification identified in the ESBWR DCD and conformance with RG 1.26 Revision 3, but FSAR Table 1.9-202 references conformance with Revision 4 dated March 2007. QA Program AR-NA-30 references Revision 4 to RG 1.26 with the DCD exception, but incorrectly references February 1976 rather than March 2007. Please clarify if seismic classifications of site-specific SSCs are consistent with RG 1.26 Revision 4.

03.02.02-2

SRM dated July 21,1993, concerning SECY-93-087 identified that the staff will review passive plant design applications using the newest codes and standards endorsed by the NRC and unapproved revisions to the codes will be reviewed on a case by case basis. Editions of various codes and standards referenced in DCD Subsection 3.2.6 are not current and newer codes and standards are not referenced in FSAR Subsections 3.2 or 1.8. Please clarify which code editions referenced are currently endorsed by the NRC and clarify if current editions of codes and standards will be applied to the detailed design and procurement of ESBWR SSCs so that these editions may be reviewed on a case by case basis. If this issue will be resolved in the DCD rather than the COL for all plant SSCs, including those that are site-specific, so advise.

03.02.02-3

General Design Criterion 1 identifies, in part, that structures systems and components important to safety shall be designed, fabricated, erected and tested to quality standards commensurate with the importance of the safety functions to be performed. Where generally recognized codes and standards are used, they shall be <u>supplemented or modified</u> as necessary to assure a quality product in keeping with the required safety function. Supplemental quality standards and QA program applicable to passive SSCs used in nonsafety-related RTNSS systems that may be important to safety are not clearly defined in the COL application for site-specific SSCs. Please clarify what supplemental quality standards are applied to nonsafety-related site-specific SSCs that are important to safety to ensure that all SSCs important to safety are designed, fabricated, erected, and tested to quality standards commensurate with the safety function to be performed. This issue was also identified in an RAI for the review of ESBWR design certification and the response identified a new Special Class is applicable to such SSCs, but specific Special Class SSCs are not identified in Section 3.2. If this issue will be resolved in the DCD rather than the COL for all plant SSCs, including those that are site-specific, so advise.