May 19, 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. 004 (SRP SECTIONS 11.02, 11.04, AND 11.05) 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

May 19, 2008

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Vice President - Nuclear Development
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OFFICE	TR:CHPB	BC:CHPB	PM:DNRL:NGE1	OGC	PM:DNRL:NGE1
NAME	JCDehmel *	TFrye *	AJohnson *	RWeisman *	TKevern *
DATE	04/18/2008	04/18/2008	04/29/2008	05/15/2008	05/19/2008

*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: 11.02, 11.04, and 11.05
Application Section: FSAR 11.2, 11.4, and 11.5

QUESTIONS

11.02-1

FSAR Sect. 11.2.1, Liquid Waste Management System - Cost-Benefit Analysis.

RAI Summary: FSAR Section 11.2.1, STD SUP 11.2-1 needs to present an updated cost-benefit analysis for the Liquid Waste Management System (LWMS) in demonstrating compliance with Appendix I to Part 50, given that NEI Template 07-11 has been withdrawn from further consideration by NEI.

RAI: FSAR Section 11.2.1, STD SUP 11.2-1 includes, by reference, draft NEI Template 07-11 as the basis of the cost-benefit analysis in justifying, in part, the design of the LWMS. The NEI template presented a bounding envelope of population doses associated with liquid effluent releases, which, if met, would demonstrate compliance with ALARA cost-benefit requirements of Section II.D of Appendix I to Part 50. However, NEI Template 07-11 was withdrawn from further consideration by NEI. As a result, NEI Template 07-11 is no longer relevant and the applicant needs to develop a plant and site-specific cost-benefit analysis demonstrating compliance with Section II.D of Appendix I to Part 50. Accordingly, provide an updated cost-benefit analysis in FSAR Section 11.2.1 for the LWMS and provide sufficient information for the staff to evaluate the bases and assumptions used in the analysis and for conducting an independent confirmation of compliance with NRC regulations and guidance.

11.04-1

1.A. FSAR Sect. 11.4.1, Solid Waste Management System - Cost-Benefit Analysis.

RAI Summary: Information is needed to justify the omission of a cost-benefit analysis for the Solid Waste Management System (SWMS) from FSAR Section 11.4.1 and the omission from that section of a reference to the cost-benefit analyses presented in FSAR Sections 11.2.1 and 11.3.1 in processing and treating liquid and gaseous effluents as by-products of processing solid wastes.

RAI: FSAR Section 11.4.1 does not present a cost-benefit analysis for the SWMS nor does it make reference to the cost-benefit analyses presented in FSAR Sections 11.2.1 and 11.3.1 in processing and treating liquid and gaseous effluents, as by-products of processing solid wastes, in demonstrating compliance with Section II.D of Appendix I to Part 50. This section of the FSAR should provide a justification for not including such an analysis or describe how the analyses presented for the LWMS and GWMS encompass the incremental amounts of liquid and gaseous effluents generated as by-products of solid waste processing. Accordingly, the appicant should revise FSAR Section 11.4.1 to include a cost-benefit analysis for the SWMS, provide the technical justification as to why the results presented in FSAR Sections 11.2 and 11.3 are adequately encompassing, or otherwise provide a justification for not including such an

analysis in compliance with NRC regulations and guidance. Provide sufficient information for the staff to evaluate the bases and assumptions used in the analysis and to conduct an independent confirmation of compliance with NRC regulations and guidance.

1.B. FSAR Sect. 11.4.2.3, Solid Waste Management System - Process Control Program.

RAI Summary: The commitment in FSAR Section 11.4.2.3, STD COL 11.4-3-A to the Process Control Program (PCP) described in draft NEI Template 07-10 needs to be updated to a reference citing the final version of the PCP, if it is ultimately approved by the NRC staff.

RAI: FSAR Section 11.4.2.3, STD COL 11.4-3-A includes a commitment to the use of the Process Control Program (PCP) as an operational program document, based on draft NEI Template 07-10. The NEI template, which is still undergoing NRC staff review, presents the functional elements of a PCP intended to demonstrate compliance with 10 CFR 50.34a and 50.36a. Accordingly, the commitment of FSAR Section 11.4.2.3, STD COL 11.4-3-A needs to be updated by referencing the final PCP, consistent with Regulatory Guide 1.206 and Section 11.4 of the Standard Review Plan (NUREG-0800), if it is ultimately approved by the NRC staff. Update all internal citations to the final PCP in applicable FSAR subsections and references.

11.05-1

FSAR Sect. 11.5.4.5, Offsite Dose Calculation Manual.

RAI Summary: The commitment in FSAR Section 11.5.4.5, STD COL 11.5-2-A to the Offsite Dose Calculation Manual (ODCM) described in draft NEI Template 07-09 needs to be updated to a reference citing the final version of the ODCM, if it is approved by the NRC staff.

RAI: FSAR Section 11.5.4.5, STD COL 11.5-2-A includes a commitment to the use of an Offsite Dose Calculation Manual (ODCM), as an operational program document, based on draft NEI Template 07-09, which is under NRC staff review. The NEI template presents the functional elements of an ODCM intended to demonstrate compliance with 10 CFR 50.34a, 50.36a, and Appendix I to Part 50. Accordingly, the commitment of FSAR Section 11.5.4.5, STD COL 11.5-2-A needs to be updated by referencing the final ODCM, consistent with Regulatory Guide 1.206 and Section 11.5 of the Standard Review Plan (NUREG-0800), contingent on whether it is approved by the NRC staff. Update all internal citations to the final ODCM in applicable FSAR subsections and references.

11.05-2

FSAR Sect. 11.5.4.6, Process and Effluent Monitoring Program.

RAI Summary: FSAR Section 11.5.4.6, on process and effluent monitoring and sampling, presents information in Table 11.5-201 on sampling for several North Anna Unit 3 plant systems. Footnotes to Table 11.5-201 that describe sampling provisions and how process streams would be treated in the event of radioactive cross-contamination appear inconsistent for three listed systems. Explain or correct the apparent inconsistencies.

RAI: FSAR Section 11.5.4.6, on process and effluent monitoring and sampling, presents information in Table 11.5-201 on sampling for several North Anna Unit 3 plant systems, including the plant service water system (item 2), storm drains and cooling tower blowdown (item 11), and sanitary waste water (item 14). Footnotes to the table appear internally inconsistent in describing sampling provisions and where the supporting information may be found in the DCD and/or FSAR. The apparent inconsistencies are: (a) Plant Service Water System (PSWS, line item 2)—For this system, footnotes No. 6 and 8 of Table 11.5-201 are provided in clarifying sampling provisions and how this sampling stream would be treated through the liquid waste management system (LWMS). However, a review of MFN 06-417 (Sup. 4) indicates that in response to DCD RAI 9.2-8 S02, footnote 8 is being replaced with footnote 4, but Table 11.5-201 does not reflect that change. Accordingly, update FSAR Table 11.5-201, line item 2 for the PSWS, to include the proper footnote citations. This information would ensure that such provisions are clearly identified in the FSAR and not likely to be omitted during the development of the sampling and analysis program for the plant specific Offsite Dose Calculation Manual in confirming compliance with liquid effluent concentration limits of Table 2 in Appendix B to Part 20 and numerical objectives of Appendix I to Part 50. (b) Storm Drains and Cooling Tower Blowdown (line item 11)—For these systems, footnote No. 4 of Table 11.5-201 does not refer to specific sampling provisions for these two systems, such as sampling points or installation of automatic composite samplers. FSAR Sections 11.5, 9.2, and 10.4 do not appear to make such provisions for either system. Confirm whether this observation is correct and update FSAR Sections 11.5, 9.2, and 10.4 by providing specific references to DCD or FSAR sections where this information is presented, and, if not, supplement the appropriate FSAR sections with additional design details. This information would ensure that such provisions are clearly identified in the FSAR and not likely to be omitted during the development of the sampling and analysis program for the plant specific Offsite Dose Calculation Manual in confirming compliance with liquid effluent concentration limits of Table 2 in Appendix B to Part 20 and numerical objectives of Appendix I to Part 50. (c) Sanitary Waste Water System (line item 14)—For this system, a new footnote should be added to the system's line item 14 (Col. 3 in Table 11.5-201) indicating that composite samplers are installed in the sanitary waste discharge lines to the sewage treatment plant for the purpose of detecting the presence of radioactivity, based on FSAR Section 9.2.4.2. This information would ensure that such provisions are clearly identified in the FSAR and not likely to be omitted during the development of the sampling and analysis program for the plant specific Offsite Dose Calculation Manual in confirming compliance with liquid effluent concentration limits of Table 2 in Appendix B to Part 20 and numerical objectives of Appendix I to Part 50.