

June 11, 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. 007 (SRP
SECTIONS 09.03.02, 11.02, 11.03, 11.04, 11.05 AND 13.05.02.01) 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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OFFICE	TR:CHPB	BC:CHPB	PM:DNRL:NGE1	OGC	PM:DNRL:NGE1
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DATE	05/14/2008	05/22/2008	05/23/2008	06/10/2008	06/11/2008

*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: 09.03.02, 11-03, 11.03, 11.04, 11.05 and 13.05.02.01

Application Section: FSAR 9.3.2, 11.2.2.3, 11.3, 11.3.1, 11.4.2.3, 11.5.4.5, and 13.5.2.2.1

QUESTIONS

09.03.02-1 SRP Section: 09.03.02 - Process and Post-Accident Sampling Systems

FSAR Section 9.3.2.2 (System Description) references Section 11.5.3.2.12 of the ESBWR DCD Revision 4 regarding available provisions in sampling the containment atmosphere. This reference is incorrect since DCD Section 11.5.3.2.12 addresses the radiation monitoring system for the technical support center air intake. Accordingly, please correct the reference citation in FSAR Section 9.3.2.2.

11.02-2 SRP Section: 11.02 - Liquid Waste Management System

FSAR Section 11.2.2.3 presents an updated description of some portions of the Liquid Waste Management System (LWMS) on sampling of permanently installed non-radioactive plant systems in upstream locations of radioactive systems in avoiding uncontrolled and unmonitored releases to the environment. Staff review indicates there is no specific information describing such sampling provisions and where samples would be collected to confirm that clean plant systems have not been cross-contaminated by radioactive process streams, other than the Reactor Component Cooling Water System. Inclusion of such information in the FSAR would ensure that sampling provisions are clearly identified and not likely to be omitted in 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. Accordingly, please supplement Section 11.2.2.3, or other appropriate FSAR sections, with such detailed sampling information.

11-03-0 SRP Section: 11.03 - Gaseous Waste Management System

FSAR Section 11.3.1, NAP ESP COL 11.1-1 incorporates by reference the current draft of NEI Template 07-11 and a supplemental analysis as the bases of the cost-benefit analysis intended to justify, in part, the design of the GWMS. NEI, however, withdrew NEI Template 07-11 from further consideration. As a result, NEI Template 07-11 is no longer relevant. Accordingly, please provide an updated plant- and site-specific cost-benefit analysis in FSAR Section 11.3.1 for the GWMS. This cost/benefit analysis should 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.

11.03-1 SRP Section: 11.03 - Gaseous Waste Management System

Staff review of FSAR Section 11.3.1 indicates that the operation of the Gaseous Waste Management System does not address a provision that allows the full bypass of the Offgas System (OGS) charcoal adsorber beds, as described in ESBWR DCD, Revision 4,

Section 11.3.2.1 (Pages 11.3-7). The ESBWR DCD OGS design provides the capability to bypass all charcoal adsorber beds under two conditions, "when fuel performance allows," and when "resulting activity release is acceptable." FSAR Section 11.3.1 does not acknowledge this provision of the ESBWR design and does not identify methods (e.g., operating procedures or OGS permissive interlocks) to control an inadvertent bypass of all charcoal beds that could result in gaseous effluent releases exceeding NRC regulatory limits. To address Part 50.34a and 50.36a in complying with offsite gaseous effluent concentration limits of Appendix B (Table 2, Column 1) to Part 20 and numerical guides of Section II of Appendix I to Part 50, please revise FSAR Section 11.3.1 to include the following: 1) description of operational plant conditions and criteria on allowable fuel performance and radioactivity releases (as noble gases, iodines, and particulates) that would allow a full bypass of the OGS charcoal adsorber beds; 2) operational controls that would be used for the activation of this feature; and, 3) description of procedures and/or system interlocks that would be used to avoid the inadvertent activation of the OGS charcoal adsorber bed bypass.

11.04-2 SRP Section: 11.04 - Solid Waste Management System

FSAR Section 11.4.2.3 presents an updated description of some portions of the Solid Waste Management System (SWMS) on sampling of permanently installed non-radioactive plant systems in upstream locations of radioactive systems in avoiding uncontrolled and unmonitored releases to the environment. Staff review indicates there is no specific information describing such sampling provisions and where samples would be collected to confirm that clean plant systems have not been cross-contaminated by radioactive process streams. Such information would ensure that such provisions are clearly identified and not likely to be omitted in 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. Accordingly, please supplement Section 11.4.2.3, or other appropriate FSAR sections, with such detailed sampling information.

11.05-3 SRP Section: 11.05 – Process and Effluent Radiological Monitoring Instrumentation and Sampling Systems

FSAR Section 11.5.4.5, STD COL 11.5-2-A commits to the development of an Offsite Dose Calculation Manual (ODCM) using the final version of NEI Template 07-09. However, this commitment is inconsistent with the technical basis and approach presented in the Environmental Report - Combined License Stage (Part 3, Rev. 0, November 2007) and Early Site Permit Application (Part 3, Rev. 9, September 2006). Staff review identified the following inconsistencies: (a) the technical basis described in the North Anna ESP (Sect. 6.2.1, p.3-6-6) cites NUREG-0472 as the basis but this document is for PWR plant designs (applicable document is NUREG-1302, Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Boiling Water Reactors, given the change implemented under NRC Generic Letter 89-01 (Suppl. No. 1); and (b) the approach described in the North Anna ESP (Sect. 6.2.1, p.3-6-6) states that the programmatic elements of the radiological environmental monitoring program would be implemented through the existing ODCM for NAPS Unit 1 and 2. Accordingly, please clarify in FSAR Section 11.5.4.5 the commitment to NEI Template 07-09 relative to ODCM descriptions and commitments documented elsewhere.

13.05.02.01-1 SRP Section: 13.05.02.01 - Operating and Emergency Operating Procedures

FSAR Section 13.5.2.2.1 provides a broad overview of illustrative functions that will be addressed by radiation protection procedures. However, it does not include the management of radioactive wastes for offsite shipment, disposal, and treatment. In comparison, the staff notes that Section 13.5.2.2.4 addresses chemistry procedures used to characterize the radiological properties of radioactive wastes and Section 13.5.2.2.5 focuses on onsite management activities of radioactive wastes. Accordingly, please revise Section 13.5.2.2.1 to include the management of radioactive wastes for offsite shipment, disposal, and treatment. In addition, please confirm, or revise, the citation of Section 13.5.2.1.1 in the last sentence of FSAR Section 13.5.2.2.5 as the appropriate reference.