September 28, 2006

Mr. David A. Christian
Senior Vice President and Chief Nuclear Officer
Dominion Resources Services, Inc.
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: SUPPLEMENT 1 TO FINAL SAFETY EVALUATION REPORT FOR THE NORTH ANNA EARLY SITE PERMIT APPLICATION

Dear Mr. Christian:

By letter dated September 25, 2003, Dominion Nuclear North Anna LLC (Dominion) submitted its application for an early site permit (ESP) to the U.S. Nuclear Regulatory Commission (NRC) in accordance with Subpart A of Part 52 of Title 10 of the *Code of Federal Regulations* (10 CFR Part 52). The NRC reviewed the ESP application and issued a safety evaluation report (SER) for an ESP at the North Anna ESP Site (NUREG-1835) in September 2005. By letter dated April 13, 2006, Dominion submitted Revision 6 to its ESP application which included a revised safety site analysis report (SSAR) and a revised environmental report. Dominion revised and supplemented its application again on June 21 and July 31, 2006 (Revisions 7 and 8).

In its revised application, Dominion proposed: (1) changing its cooling design for proposed Unit 3 and (2) increasing the requested power levels for proposed Units 3 and 4. Dominion changed the once-through cooling system planned for Unit 3 in previous versions of the SSAR to a closed-cycle system; Unit 4 will use the dry cooling system as originally proposed. Dominion increased the power levels for Units 3 and 4 to match the designed maximum power (4500 MWt) of a General Electric Economic and Simple Boiling-Water Reactor (ESBWR), one of the reactor designs included in the plant parameter envelope.

By letter dated August 15, 2006, the NRC transmitted to you Supplement 1 to the SER in which the staff evaluated the impact of Dominion's changes identified in Revisions 6, 7 and 8 of the ESP application. The staff transmitted this supplement in accordance with the review schedule provided to Dominion by letter dated May 4, 2006. As identified in the letter dated August 15, 2006, Dominion was given a 14-day period to review Supplement 1 for proprietary information. During this time, it was discovered that the bounding value in the application for the total tritium concentration in liquid effluent releases could potentially exceed maximum tritium concentration limit set in the EPA drinking water standards. Therefore, Dominion revised its ESP application (Revision 9) on September 12, 2006, to reduce the bounding value for tritium activity release (associated with the ACR-700 design), to ensure that the tritium concentration in liquid effluent releases is less than both the 10 CFR Part 20 limit and the limit set in the EPA drinking water standards. The NRC revised Supplement 1 to the SER to reflect the changes in Revision 9 of the application.

Dominion has completed its proprietary review of Supplement 1 to the final SER and found no information it considers proprietary. Therefore, the staff is releasing Supplement 1 to the public. Interested persons may access the document by visiting the NRC's Public Document Room in Rockville, Maryland, through the NRC's public web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room). The ADAMS accession number for Supplement 1 is ML062210383. A copy will also be made available on the NRC's public web site at http://www.nrc.gov/reactors/new-licensing/esp/north-anna.html.

Although the staff has publicly released Supplement 1 to the SER, the review of the Advisory Committee on Reactor Safeguards (ACRS) is still pending. Upon receipt of a letter regarding Supplement 1 from the ACRS, the staff will publish a bound version of Supplement 1 to NUREG-1835, including the ACRS letter. The staff intends to issue Supplement 1 to NUREG-1835 by November 20, 2006. Issuance of this supplement is an important milestone in the staff's review to determine whether Dominion's application meets the Commission's regulations.

If you have any questions or comments concerning this matter, contact Nitin Patel, the NRC's project manager at (301) 415-3201 or nxp1@nrc.gov.

Sincerely,

/RA T. Bergman for:/

David B. Matthews, Director
Division of New Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 52-008

Enclosure: As stated

cc w/o encls: See next page

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*See previous concurrence
ADAMS ACCESSION NUMBER: ML062210383-Package

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Letter to David A. Christian from David B. Matthews dated September 28, 2006

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