Dominion Nuclear North Anna, LLC
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Dominion®

September 12, 2006

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Serial No. 06-790
ESP/JDH
Docket No. 52-008

DOMINION NUCLEAR NORTH ANNA, LLC
NORTH ANNA EARLY SITE PERMIT APPLICATION
REVISION 9 TO THE NORTH ANNA ESP APPLICATION

Dominion submitted Revision 8 of the North Anna ESP application on July 31, 2006. Subsequent to that submittal, an issue was raised involving certain bounding plant parameter values. As a result, Revision 9 to the North Anna ESP Application has been prepared.

A description of the issue and an evaluation of the changes are provided in Enclosure 1. A summary of the changes in Revision 9 of the North Anna ESP application is provided in Enclosure 2. A compact disc containing Revision 9 of the North Anna ESP application is provided in Enclosure 3.

If you have any questions or require additional information, please contact Tony Banks at 804-273-2170 or Joe Hegner at 804-273-2770.

Very truly yours,

Eugene S. Grecheck
Vice President-Nuclear Support Services

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Enclosures:

1. Issue and Evaluation of Changes.
2. Summary of Changes to North Anna ESP Application Revision 9.
3. One CD-ROM labeled "North Anna Early Site Permit Application, Docket No. 52-008, September 2003; Revision 9, September 2006, NRC ADAMS Edition," containing the following files:
   001 North Anna ESP Application R9 (1 of 6).pdf; 14.7MB; publicly available
   002 North Anna ESP Application R9 (2 of 6).pdf; 13,709,508 bytes, publicly available
   003 North Anna ESP Application R9 (3 of 6).pdf; 50,736,443 bytes, publicly available
   004 North Anna ESP Application R9 (4 of 6).pdf; 12,834,385 bytes, publicly available
   005 North Anna ESP Application R9 (5 of 6.pdf; 32,611,062 bytes, publicly available
   006 North Anna ESP Application R9 (6 of 6).pdf; 21,896,347 bytes, publicly available

Commitments made in this letter: None

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Serial No. 06-790
Docket No. 52-008
ESP Application Rev. 9

COMMONWEALTH OF VIRGINIA

COUNTY OF HENRICO

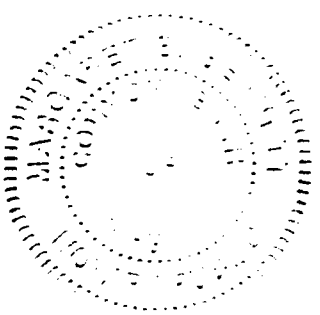
The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Eugene S. Grecheck, who is Vice President, Nuclear Support Services, of Dominion Nuclear North Anna, LLC. He has affirmed before me that he is duly authorized to execute and file the foregoing document on behalf of Dominion Nuclear North Anna, LLC, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 12th day of September, 2006.

My Commission expires: August 31, 2008

Margaret B. Bennett
Notary Public

(SEAL)



Enclosure 1

Issue and Evaluation of Changes

Issue

The bounding value for tritium concentrations in liquid effluent releases could potentially exceed EPA drinking water standards.

Evaluation

Dominion reviewed liquid effluent release concentrations based on bounding site specific parameter values. The bounding value for curies of tritium released per year was reduced to ensure that the tritium concentration in liquid effluents is less than both the NRC Part 20 limit and the EPA drinking water standard.

The liquid effluent concentrations and dose consequences in Revision 8 of the application were based on composite maximum isotopic activity releases encompassing multiple reactor designs. (The tritium activity release reflected the bounding value of 3100 Ci/yr per new unit associated with the ACR-700 design.) This release resulted in an activity concentration in liquid effluent releases that, while meeting 10 CFR Part 20, could, on a theoretical basis, exceed other federal limits.

Dominion has elected to revise the limiting value. Limiting the tritium release from each new unit from 3100 to 850 Ci/yr ensures that the total concentration in liquid effluent releases does not exceed either NRC limits or EPA standards. The liquid effluent concentrations and dose consequences in the application have been revised to reflect this release rate. In addition, the total tritium concentration resulting from two new units in addition to the two existing units would meet both the NRC Part 20 limits and the EPA drinking water standards.

Application Revision

The specific changes to the application are as follows:

- SSAR Section 1.3.1 and ER Section 5.4.2.1 – These sections have been revised to indicate that liquid effluent releases are based on composite isotopic activities from multiple designs for all isotopes except tritium.
- SSAR Table 1.3-7 and ER Table 5.4-6 – These tables show the liquid effluent release rates and concentrations by isotope and compare the concentrations to the limits in 10 CFR 20. They have been revised to demonstrate that, based on the new release rate of 850 Ci/yr, the tritium concentration is also within EPA's drinking water standards. The footnotes of these tables have also been revised to clarify that composite values are shown for all isotopes except tritium.

- ER Table 3.1-9 – This site-specific plant parameters envelope table has been revised to show a bounding liquid effluent tritium release rate of 850 Ci/yr per new unit.
- ER Tables 5.4-8, 5.4-10, 5.4-11, 5.4-12, and 5.4-16 – These tables have been revised to reflect liquid effluent doses corresponding to a tritium release of 850 Ci/yr per new unit.

Enclosure 2

Summary of Changes to North Anna ESP Application Revision 9

Summary of Changes to North Anna ESP Application Revision 9	
Affected Section, Table, or Figure	**Reason for Change**
Part 2 Chapter 1	
▪ Section 1.3.1	▪ Change in tritium source in liquid effluent
▪ Table 1.3-7	▪ Change in tritium source in liquid effluent
Part 3 Chapter 3	
▪ Table 3.1-9	▪ Change in tritium source in liquid effluent
Part 3 Chapter 5	
▪ Section 5.4.2.1	▪ Change in tritium source in liquid effluent
▪ Table 5.4-6	▪ Change in tritium source in liquid effluent
▪ Table 5.4-8	▪ Change in tritium source in liquid effluent
▪ Table 5.4-10	▪ Change in tritium source in liquid effluent
▪ Table 5.4-11	▪ Change in tritium source in liquid effluent
▪ Table 5.4-12	▪ Change in tritium source in liquid effluent
▪ Table 5.4-16	▪ Change in tritium source in liquid effluent

Enclosure 3

One CD-ROM labeled "North Anna Early Site Permit Application, Docket No. 52-008, September 2003; Revision 9, September 2006, NRC ADAMS Edition"