

February 10, 2006

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

SUBJECT: NORTH ANNA EARLY SITE PERMIT (ESP) APPLICATION REVIEW
SCHEDULE (TAC NOS. MC1126 AND MC 1128)

Dear Mr. Christian:

On January 13, 2006, Dominion Nuclear North Anna, LLC (Dominion) submitted a supplement to its application for an early site permit (ESP) for the North Anna ESP site. The supplement proposes to change the cooling system for proposed Unit 3 and increase the power level for both proposed Units 3 and 4 from 4300 MWt to 4500 MWt. The purpose of this letter is to inform you of the results of the U.S. Nuclear Regulatory Commission (NRC) staff's initial review of the supplement to the ESP application and provide a schedule for the completion of the review. Dominion's decision to revise the application has resulted in a revision to the review schedule.

The cooling system change for proposed Unit 3 from once through cooling to a closed cooling system and the power level increase for both proposed Units 3 and 4 from 4300 MWt to 4500 MWt are substantial changes. These substantial changes to your application require the NRC to issue, in accordance with 10 CFR 51.72, a supplement to its draft environmental impact statement (EIS). The changes also warrant a supplement to the final safety evaluation report (SER). These supplements will focus on the impacts of the above changes. After analyzing the changes in your submittal, the staff will issue its supplement to the draft EIS for public comment and issue its supplemental final SER. After the comments are received and analyzed, the final EIS will be issued as shown in the schedule in Attachment 2.

The NRC staff has reviewed the contents of your supplement and has identified several key areas in which the staff needs additional information to complete its review. 10 CFR 51.45 requires that the environmental report contain a description of the proposed action and its impact on the environment. In the supplement, Dominion failed to adequately describe the operation of the new cooling system, including its interactions with the environment and its effects on reactor site criteria. Dominion also failed to adequately address the impact of the new cooling system and associated consumptive water use on downstream users and aquatic biota downstream of the dam. These issues and the other key areas for which the staff needs additional information are discussed in detail in Attachment 1 to this letter. In a separate letter, the staff will request information on additional issues identified during the review.

We request that you provide a complete revised application addressing the staff's information needs identified in Attachment 1. Once you have adequately addressed the issues, the staff expects to issue the supplemental final SER and the final EIS for the North Anna ESP application within 260 days in accordance with the schedule in Attachment 2 to this letter. In order for the schedule in Attachment 2 to be met, Dominion must be able to meet its milestones and provide a high quality revised application.

In your letters dated October 24 and November 22, 2005, you stated that you have made these design changes partly due to the concerns raised by state regulatory bodies. Please confirm that the concerns raised by the state agencies have been resolved, and that another substantial design change, which would impact both the NRC's and Dominion's schedules and resources, will not be necessary.

The staff plans to arrange a meeting with you within two weeks of the issuance of this letter to discuss in detail the key issues identified in Attachment 1 and the additional information requests that will be made under separate cover. If you have any questions on this matter, please contact the NRC Project Manager, Nitin Patel, at 301-415-3201 or nxp1@nrc.gov.

Sincerely,

/RA W. Beckner for:/

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

Docket No.: 52-008

Attachments :As stated

cc w/atts: See next page

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**Staff Information Needs Identified In the Review
of Dominion Nuclear North Anna, LLC
Supplement to Early Site Permit (ESP) Application
For the North Anna ESP Site**

In reviewing an application for an ESP, the NRC staff makes certain decisions on the physical suitability of a specific site for the construction and operation of a nuclear power plant and the environmental impacts of plant construction and operation. The ESP application and review process makes it possible to evaluate and resolve safety and environmental issues related to siting before the applicant makes large commitments of resources. Before issuing an ESP, the NRC must first prepare both a safety evaluation report (SER) and an environmental impact statement (EIS). The purpose of the SER is to document the NRC staff's findings regarding site safety characteristics and emergency planning. The purpose of the EIS is to address questions regarding the impact of the proposed new reactor(s) on the environment. One of the siting issues for North Anna is water use and quality. In the previous draft EIS, the NRC evaluated the originally proposed once through cooling system for proposed Unit 3. The Commonwealth of Virginia expressed concerns about the consumptive water use and thermal impacts of the once through cooling system on Lake Anna and downstream users. In response, Dominion revised its application on January 13, 2006, to use a closed cycle cooling system consisting of wet and dry cooling towers for proposed Unit 3.

10 CFR 51.45 requires that the environmental report contain a description of the proposed action and its impact on the environment. In the supplement, Dominion failed to describe the operation of the new cooling system, including its interactions with the environment and its effects on reactor site criteria. Specifically, the description of when the dry cooling system for proposed Unit 3 will be used is too vague for the staff to determine the impacts on Lake Anna, downstream users or aquatic life downstream of the dam. In order to disclose the impacts, the staff will need to know the maximum amount of water proposed Unit 3 will use at the lake levels which correspond to changes in flow rates from the North Anna Dam.

In addition, deferral of analysis of environmental issues to the COL application cannot be done for issues that affect siting, such as cooling tower impacts. If design information is lacking, then the applicant should make reasonable assumptions about the design, so that the staff can evaluate the impacts. If the assumptions are bounding at the COL stage no further analysis will be required. If the assumptions prove not to be bounding at the COL stage, then the staff will evaluate the new and potentially significant information.

The following are the key areas in which the staff needs additional information to complete its review:

1. Description of the Operation of the New Cooling System Design

The supplement includes a limited description of the operation of the closed-cycle dry and wet tower cooling system. Please provide a detailed description of the operation of the new cooling design, including interactions with the environment and effects on reactor site criteria.

Additional information for operational details identified to date include the following:

ER Section 5.2.2.4, "Proposed Practices to Minimize or Avoid Impacts"

This section does not provide sufficient detail to determine water usage and therefore the impact on the lake level and downstream users.

SSAR Section 2.4, "Hydrology"

This section does not provide sufficient information for the staff to assess the reliability of the hybrid cooling tower system insofar as its use affects the reliance of Unit 3 on its emergency cooling system.

2. Evaluation of Aquatic Impacts

The new cooling system design reduces the thermal impacts on the lake. However, there is insufficient evaluation on how the change to the cooling system and consumptive water use will affect aquatic biota and downstream users. In particular, the supplement should provide more detail on the impact of the new cooling system on striped bass in the lake and downstream of the dam.

3. Deferral of Required Analyses to the Combined License (COL) Application

The staff does not need to know the detailed reactor design at the ESP stage. However, the staff needs sufficient information to analyze and disclose the impacts to the environment. The staff must have sufficient information on the impacts to the environment of the proposed action to allow the staff to make a comparison to alternate sites. If design level information is lacking, the applicant should make reasonable assumptions about the potential design and evaluate the impact based on those assumptions. The following are the deferrals identified to date:

SSAR Chapter 15, "Accident Analysis and ER Section 7.1.3, "Source Terms"

In your letter dated November 22, 2005, you stated that you selected the ESBWR as your reactor design and that your supplement will fully address changes to the North Anna ESP application based on ESBWR design information provided in GE's design certification application.

The ABWR design is certified under 10 CFR Part 100, Subpart A and 10 CFR 50.34(a)(1)(i), while the ESBWR design is not certified and must be evaluated under 10 CFR Part 100, Subpart B and 10 CFR 50.34(a)(1)(ii). Please describe the design basis accidents, the reactor accident source terms, and the design-specific χ/Q values for the ESBWR design. Demonstrate that the reactor accident source term plant parameter envelope (PPE) values specified in the application are still appropriate, and that the radiological doses consequence at the proposed ESP site would meet the requirements of 10 CFR 50.34.

ER Section 5.3.3.1, "Heat Dissipation to the Atmosphere"

This section defers the analysis of fogging and salt deposition to the COL application. Please provide a detailed analysis, including reasonable assumptions for design features for mitigating the effects of fogging and salt deposition, so the staff can evaluate the impacts of fogging and salt deposition.

ER Section 5.8.1.2, "Noise"

This section concluded that the noise associated with the new cooling design would not cause adverse offsite impacts and that a noise study would be described in the COL application. Describe calculations and assumptions used to estimate noise levels at the exclusion area boundary (EAB) and closest residence. Include initial sound levels (background and cooling towers), the number of sources, distances, and attenuation factors considered in reaching a conclusion even if not included in the calculations.

4. Sections of Application Identified as Unaffected

The supplement provides no justification why the sections identified as unaffected by the change to the cooling system and the increase in power level are unaffected. For example, why is ER section 7.2, Severe Accidents, not affected by the increase in power from 4300 - 4500 MWt. Provide justification for why sections identified as unaffected are not affected by the change in power level or the cooling system.

5. State Permits

In your letters dated October 24 and November 22, 2005, you stated that you have made these design changes partly due to the concerns raised by state regulatory bodies. Please confirm that the concerns raised by the state agencies have been resolved, and that another substantial design change, which would impact both NRC and Dominion schedules and resources, will not be necessary.

Milestone	Elapsed Time
Applicant submits Revision 6 of the early site permit application which addresses the key issues in Attachment 1	T = 0
Press Release announcing receipt and availability	T + 14 days
Safety requests for additional information (RAIs) issued to the applicant (optional)	T + 20 days
Federal Register Notice (FRN) published for Notice of Intent to prepare a supplement to the draft environmental impact statement (EIS)	T + 28 days
Applicant submits responses to safety RAIs	T + 35 days
Site Audit	T + 42 days
Applicant submits application final revision of the Site Safety Analysis Report	T + 65 days
Notice of Availability/Supplemental Draft EIS Issued, Start of Comment Period	T + 98 days
Supplemental Final safety evaluation report (SER) issued	T + 115 days
Public meeting to discuss draft EIS	
End of draft EIS comment period	T + 143 days
Advisory Committee on Reactor Safeguards (ACRS) Full Committee meeting on Supplemental Final SER	T + 145 days*
ACRS final letter to Executive Director for Operations	T + 170 days*
Supplemental Final SER issued as NUREG	T + 215 days*
Final EIS Issued	T + 260 days

* Milestones depend on ACRS availability (ACRS Full Committee does not meet in August or January)

It will take nominal 12 months for Atomic Safety and Licensing Board decision and Commission decision to issue Early Site Permit.

NORTH ANNA EARLY SITE PERMIT
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