

March 25, 2002

Mr. David A. Christian
Senior Vice President
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SUBJECT: NORTH ANNA POWER STATION, UNITS 1 AND 2 - ENVIRONMENTAL
ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT FOR THE
PROPOSED CONVERSION TO THE IMPROVED TECHNICAL
SPECIFICATIONS (TAC NOS. MB0799 AND MB0800)

Dear Mr. Christian

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for amendments dated December 11, 2000, as supplemented by letters dated May 30, June 18, July 16, July 20, August 13, August 27, September 27, October 10, October 17, November 8, November 19, November 29, December 3, December 7, December 12, and December 13, 2001, and January 2, January 25, January 31, February 11, February 18, February 22, February 27, and March 7, 2002. The proposed amendments would convert the current Technical Specifications for North Anna Power Station, Units 1 and 2, to a set of improved Technical Specifications based on NUREG-1431, "Standard Technical Specifications, Westinghouse Plants," Revision 1, dated April 1995.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

Stephen R. Monarque, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-338 and 50-339

Enclosure: Environmental Assessment

cc w/encl: See next page

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North Anna Power Station
Units 1 and 2

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UNITED STATES NUCLEAR REGULATORY COMMISSION

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NOS. 50-338 AND 50-339

NORTH ANNA POWER STATION, UNITS 1 AND 2

ENVIRONMENTAL ASSESSMENT AND FINDING OF

NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of amendments to Facility Operating License Nos. NPF-4 and NPF-7, issued to Virginia Electric and Power Company (the licensee) for operation of the North Anna Power Station, Units 1 and 2, located in Louisa County, Virginia. Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Sections 51.21 and 51.32, the NRC is issuing this environmental assessment and finding of no significant impact.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed action would be a full conversion from the current technical specifications (CTS) to a set of improved technical specifications (ITS) based on NUREG-1431, "Standard Technical Specifications, Westinghouse Plants," Revision 1, dated April 1995. The proposed action is in accordance with the licensee's application dated December 11, 2000, as supplemented by letters dated May 30, June 18, July 16, July 20, August 13, August 27, September 27, October 10, October 17, November 8, November 19, November 29, December 3, December 7, December 12, and December 13, 2001, and January 2, January 25, January 31, February 11, February 18, February 22, February 27, and March 7, 2002.

The Need for the Proposed Action:

The Commission's "Proposed Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" (52 FR 3788), dated February 6, 1987, contained an Interim Policy Statement that set forth objective criteria for determining which regulatory requirements and operating restrictions should be included in the TS. When it issued the Interim Policy Statement, the Commission also requested comments on it. Subsequently, to implement the Interim Policy Statement, each reactor vendor owners group and the NRC staff began developing standard TS (STS) for reactors supplied by each vendor. The Commission then published its "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" (58 FR 39132), dated July 22, 1993, in which it addressed comments received on the Interim Policy Statement, and incorporated experience in developing the STS. The Final Policy Statement formed the basis for a revision to 10 CFR 50.36 (60 FR 36953), dated July 19, 1995, that codified the criteria for determining the content of TS. The NRC Committee to Review Generic Requirements reviewed the STS, made note of their safety merits, and indicated its support of conversion by operating plants to the STS. For the North Anna Power Station, Units 1 and 2, the STS are NUREG-1431, Revision 1, "Standard Technical Specifications, Westinghouse Plants," Revision 1, dated April 1995. This document formed the basis for the North Anna Power Station, Units 1 and 2, conversion.

The proposed changes to the CTS are based on NUREG-1431 and guidance provided in the Final Policy Statement. The objective of this action is to completely rewrite, reformat, and streamline the CTS (i.e., to convert the CTS to ITS). Emphasis was placed on human factors principles to improve clarity and understanding. The Bases section has been significantly expanded to clarify and better explain the purpose and foundation of each specification. In addition to NUREG-1431, portions of the CTS were also used as the basis for the development of

the North Anna Power Station, Units 1 and 2 ITS. Plant-specific issues (i.e., unique design features, requirements, and operating practices) were discussed at length with the licensee.

The proposed changes from the CTS can be grouped into four general categories. These groupings are characterized as administrative changes, relocated changes, more restrictive changes, and less restrictive changes. They are described as follows:

Administrative changes are those that involve restructuring, renumbering, rewording, complex rearranging of requirements, and other changes not affecting technical content or substantially revising an operating requirement. The reformatting, renumbering, and rewording processes reflect the attributes of NUREG-1431 and do not involve technical changes to the existing TS. The proposed changes include: (a) identifying plant-specific wording for system names, etc.; (b) changing the wording of specification titles in the CTS to conform to the STS; (c) splitting up requirements that are currently grouped, or combining requirements that are currently in separate specifications; (d) deleting specifications whose applicability has expired; and (e) changing to wording that is consistent with the CTS but that more clearly or explicitly states existing requirements. Such changes are administrative in nature and do not impact initiators of analyzed events or assumed mitigation of accident or transient events.

Relocated changes are those involving relocation of requirements and surveillances for structures, systems, components, or variables that do not meet the criteria for inclusion in the TS. Relocated changes are those CTS requirements that do not satisfy or fall within any of the four criteria specified in 10 CFR 50.36(c)(2)(ii) and may be relocated to appropriate licensee-controlled documents.

The licensee's application of the screening criteria to North Anna Power Station, Units 1 and 2, is described in the December 11, 2000, application. The affected structures, systems, components, or variables are not assumed to be initiators of analyzed events and are not assumed to mitigate accident or transient events. The requirements and surveillances for these

affected structures, systems, components, or variables will be relocated from the TS to administratively controlled documents such as the quality assurance program, the ITS Bases, the Technical Requirements Manual, the Core Operating Limits Report, the Offsite Dose Calculation Manual, or other licensee-controlled documents. Changes made to these documents will be made pursuant to 10 CFR 50.59 or other NRC-approved control mechanisms which provide appropriate procedural means to control changes by the licensee.

More restrictive changes are those involving more stringent requirements compared to the CTS for operation of the plant. These more stringent requirements do not result in operation that will alter assumptions relative to the mitigation of an accident or transient event. The more restrictive requirements will not alter the operation of process variables, structures, systems, and components described in the safety analyses.

Less restrictive changes are those where CTS requirements are relaxed, relocated, eliminated, or where new plant operational flexibility has been provided. When requirements have been shown to provide little or no safety benefit, their removal from the TS may be appropriate. In most cases, relaxations previously granted to individual plants on a plant-specific basis were the result of (a) generic NRC actions, (b) new staff positions that have evolved from technological advancements and operating experience, or (c) resolution of the owners groups' comments on the ITS. Generic relaxations contained in NUREG-1431 were reviewed by the staff and found to be acceptable because they were consistent with current licensing practices and NRC regulations. The licensee's design was reviewed to determine if the specific design basis and licensing basis were consistent with the technical basis for the model requirements in NUREG-1431, thus providing a basis for these revised TS, or if relaxation of the requirements in the CTS is warranted based on the justification provided by the licensee.

These administrative, relocated, more restrictive, and less restrictive changes to the requirements of the CTS do not result in operations that will alter assumptions relative to mitigation of an analyzed accident or transient event.

In addition, there are 18 changes that are different from the requirements in both the CTS and NUREG-1431 or that are beyond the scope of the changes that are needed to meet the overall purpose of the conversion. These changes are as follows:

1. Change the Allowable Value for engineered safety feature actuation system (ESFAS) interlock P-12 from ≤ 545 degrees F and ≥ 541 degrees F to ≤ 545 degrees F and ≥ 542 degrees F. (ITS 3.3.2)
2. Remove the trip setpoints and change the Allowable Values for the ESFAS Instrumentation. (ITS 3.3.2)
3. Add a note to Action C to indicate that the accumulator isolation is only applicable when accumulator pressure is greater than the power-operated relief valve (PORV) setting, add REQUIRED ACTION C.2 to state "Remove power from affected accumulator isolation valve operators," and add a note in the Limiting Condition for Operation (LCO) section that states "Accumulator isolation with power removed from the isolation valve operators is only required when accumulator pressure is greater than the PORV lift setting." (ITS 3.4.12)
4. Revise required Actions A.2, B.2, C.2, and D.2 to allow verification by administrative controls to ensure the Main Feedwater Isolation Valves, Main Feedwater Regulating Valves, Main Feedwater Pump Discharge Valves, and Main Feedwater Regulating Bypass Valves are closed. (ITS 3.7.3)
5. Remove Component Cooling Water System from ITS LCO 3.7.7. (ITS 3.7.7)
6. Revise the definition of the Ultimate Heat Sink (UHS), which includes the North Anna and Service Water Reservoirs, to only include the Service Water Reservoir. Delete surveillance requirements (SRs) on the North Anna Reservoir. (ITS 3.7.9)
7. Revise the SR frequency from "18 months" to "18 months on a staggered test basis" for the Main Control Room (MCR)/Emergency Switchgear Room (ESGR) Air Conditioning System. (ITS 3.7.11.1)

8. Add a note to allow the emergency core cooling system (ECCS) pump room boundary openings, which were not open by design, to be opened intermittently under administrative control. (ITS 3.7.12)
9. Add an SR to actuate each ECCS pump room exhaust air cleanup system train by aligning the safeguards area exhaust flow and auxiliary building central exhaust flow through the auxiliary building high-efficiency particulate air filter and charcoal adsorber assembly. Change current SRs to verify each safeguards area exhaust flow is diverted and each auxiliary building filter bank is actuated on an actual or simulated actuation signal. (ITS 3.7.12.2 and 3.7.12.4)
10. Delete testing requirements for the fuel building filtration system. (ITS 3.7.15)
11. Delete the requirements to obtain NRC approval prior to plant operations whenever a steam generator is found to be in Category C-3. (ITS Table 5.5.8-2)
12. Implement plant-specific equations for the overtemperature and overpower delta T equations. (ITS 3.3.1)
13. Change SR 3.3.1.2 and the CTS by only requiring an adjustment of the power range channel if the indicated power of the nuclear instrumentation channel is more than 2% lower than the calculated power of the calorimetric. (ITS 3.3.1)
14. Revise the allowable values of the setpoint for the P-7 low power reactor trips block interlock to a value that differs from the CTS. (ITS 3.3.1, Table 3.3.1-1)
15. Revise the ITS to require entry into ACTION if less than 100% of MCR/ESGR air conditioning system is available. (ITS 3.7.11)
16. Add a function to Table 3.3.2-1 for automatic switchover to containment sump to occur when the refueling water storage tank level is at low - low level. (ITS 3.3.2)
17. Revise the CTS values for reactor trip system instrumentation interlocks by not requiring these specific interlocks to state the reset values for the allowable values. (ITS 3.3.1)

18. Implement Technical Report EE-0116, Revision 1, "Allowable Values for Surry and North Anna Improved Technical Specifications (ITS) Tables 3.3.1-1 and 3.3.2-1."

Environmental Impacts of the Proposed Action:

The NRC staff has completed its evaluation of the proposed action and concludes that the proposed TS conversion would not increase the probability or consequences of accidents previously analyzed and would not affect facility radiation levels or facility radiological effluents. Specifically, the proposed TS changes will not increase the probability or consequences of accidents, no changes are being made in the types or amounts of any effluent that may be released offsite, and there is no significant increase in the allowable individual or cumulative occupational radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential nonradiological impacts, the proposed action does not have a potential to affect any historic sites because no previously undisturbed area will be affected by the proposed TS changes. It does not affect nonradiological plant effluents and has no other environmental impact. Therefore, there are no significant nonradiological environmental impacts associated with the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

Environmental Impacts of the Alternatives to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the "no-action" alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

The action does not involve the use of any different resource than those previously considered in the Final Environmental Statement for the North Anna Power Station, Units 1 and 2, dated April 1973.

Agencies and Persons Consulted:

On February 27, 2002, the staff consulted with the Virginia State Official, Mr. Les Foldesi of the Virginia Department of Health, Bureau of Radiological Health, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated December 11, 2000, as supplemented by letters dated May 30, June 18, July 16, July 20, August 13, August 27, September 27, October 10, October 17, November 8, November 19, November 29, December 3, December 7, December 12, and December 13, 2001, and January 2, January 25, January 31, February 11, February 18, February 22, February 27, and March 7, 2002. Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the internet at the NRC Web site, <http://www.nrc.gov/reading-rm/adams/html>. Persons who do not have access to

ADAMS or who encounter problems in accessing the documents located in ADAMS, should contact the NRC PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to pdr@nrc.gov.

Dated at Rockville, Maryland, this 25th day of March 2002.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Stephen R. Monarque, Project Manager, Section 1
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Division of Licensing Project Management
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