

July 30, 2001

Mr. David A. Christian
Senior Vice President and
Chief Nuclear Officer
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SUBJECT: NORTH ANNA POWER STATION, UNITS 1 AND 2: REQUEST FOR
ADDITIONAL INFORMATION (RAI) REGARDING SECTIONS 2.1, 3.1, 3.2, AND
3.9 OF THE IMPROVED TECHNICAL SPECIFICATIONS (ITS) FOR NORTH
ANNA POWER STATION, UNITS 1 AND 2 (TAC NOS. MB0799 AND MB0800)

Dear Mr. Christian:

The NRC staff reviewed your application dated December 11, 2000, to change the format and content of the Current Technical Specifications (CTS) to be consistent with NUREG-1431, "Standard Technical Specifications - Westinghouse Plants," Revision 1, and certain generic changes to the NUREG.

On the basis of our review of the proposed changes for ITS Sections 2.1, 3.1, 3.2, and 3.9, we find that the additional information identified in the enclosure is needed. This inquiry was discussed with Ms. Regina Borsh of your licensing staff on July 3, 2001, who agreed to provide the staff with a response within 90 days of the date of this letter.

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: Request for Additional Information

cc w/encl: See next page

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Units 1 and 2

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REQUEST FOR ADDITIONAL INFORMATION (RAI)
NORTH ANNA POWER STATION, UNITS 1 AND 2 (NAPS)
IMPROVED TECHNICAL SPECIFICATIONS (ITS)

SECTION 2.1, SAFETY LIMITS (SLs)

RAI 2.1.1-1

ITS 2.1.1 Reactor Core SLs, Insert
Current Technical Specification (CTS) 2.1.1 Reference to figures and limits relocated to the COLR
Discussion of Changes (DOC) LA.1

The DOC LA.1 describes the CTS changes as “relocating the reactor core SLs to the COLR ...”.

Comment: The DOC LA.1 description is incorrect. The SLs are retained in the ITS. The limits that are relocated are operational limits that preclude reaching the SLs. SLs are required to be in the TS. VEPCO should revise the DOC.

RAI 2.1.2-1

ITS Bases 2.1.2 Reactor Coolant System (RCS) Pressure SL, Applicable Safety Analyses
Reactor Trip System Allowable Values and Trip Setpoints
Justification for Deviation (JFD)-2

The ITS revises the third paragraph of the Bases Standard Technical Specification (STS) 2.1.2 Applicable Safety Analyses by replacing the word “setpoint” with “allowable value.”

Comment: The third paragraph of the Bases ITS 2.1.2 Applicable Safety Analyses discusses an allowable value as being “set.” Setpoints are “set,” not allowable values. The replacing of the word “setpoint” with “allowable value” is incorrect.

SECTION 3.1 - REACTIVITY CONTROL SYSTEMS

RAI 3.1.4-1

ITS 3.1.4 Rod Group Alignment Limits,
ITS 3.1.4 Limiting Condition for Operation (LCO), Note on Indicated Rod Position
CTS Applicability Footnote
JFD-7

The ITS and CTS notes permit a wider than normal indicated rod position inaccuracy band for 1 hour in every 24-hour period, to allow for thermal soak time.

Comment: The intent of the LCO on alignment limits is to ensure the control rods are aligned, and not to focus on the rod position indication system, as there is a separate Rod Position Indication specification to perform that function. The CTS note is not consistent with the intent of the STS LCO. If there is a need for thermal soak time to be addressed in the ITS, the Rod Position Indication specification is the correct place.

RAI 3.1.4-2

ITS Bases 3.1.4 Rod Group Alignment Limits

Required Actions

Incorporation of Technical Specifications Task Force (TSTF)-240 into the ITS

The ITS adopts TSTF-240, which is not approved.

Comment: TSTF-240 modifies the “B” Required Actions, and associated Bases. TSTF-240 was not approved because it deleted relevant information in the Bases. The actual changes to the Required Actions are acceptable. The information in the deleted B.1 Bases paragraph should be retained.

RAI 3.1.5-1

ITS 3.1.5 Shutdown Bank Insertion Limits

ITS Condition B and associated Required Actions

CTS 3.1.3.5 Actions b.1, b.3, and b.4

JFD-1

The ITS adopts the CTS allowance for one Shutdown Bank to be below the insertion limit.

Comment: Virginia Electric and Power Company (VEPCO) should indicate if this Condition has been entered in the past and provide the need for this Condition. The second Condition B statement, indicating each control and shutdown bank to be within alignment limits, should address control and shutdown rods. Rewording the Condition will avoid potential confusion since only one rod is permitted to be misaligned.

RAI 3.1.5-2

ITS Bases 3.1.5 Shutdown Bank Insertion Limits

ITS 3.1.5 Bases Applicability section

JFD-6

The last sentence to the ITS 3.1.5 Bases Applicability section has been added that is not in the STS wording. The sentence reads, “Should the SR testing be suspended due to equipment malfunction with the rod bank below the insertion limit, the applicable Condition should be entered.”

Comment: VEPCO should provide the purpose of this sentence.

RAI 3.1.6-1

ITS 3.1.6 Control Bank Insertion Limits

ITS Condition C and associated Required Actions

CTS 3.1.3.6 Actions b.1, b.3, and b.4

JFD-1

The ITS adopts the CTS allowance for one Control Bank to be below the insertion limit.

Comment: VEPCO should indicate if this Condition has been entered in the past and provide the need for this Condition. The second Condition C statement, indicating each control and shutdown bank to be within alignment limits, should address control and shutdown rods. Rewording the Condition will avoid potential confusion since only one rod is permitted to be misaligned. In addition, VEPCO should reword the first Condition C statement to read as the first ITS 3.1.5 Condition B statement reads, that is: “One Control Bank inserted ...”.

RAI 3.1.6-2

ITS Bases 3.1.6 Control Bank Insertion Limits
ITS 3.1.6 Bases Applicability section
JFD-5

The last sentence to the ITS Bases 3.1.6 Applicability section has been added that is not in the STS wording. The sentence reads, “Should the SR testing be suspended due to equipment malfunction with the rod bank below the insertion limit, the applicable Condition should be entered.”

Comment: VEPCO should provide the purpose of this sentence.

RAI 3.1.7-1

ITS 3.1.7 Rod Position Indication (RPI)
ITS Surveillance Requirement (SR) 3.1.7.1 to perform an RPI Channel Calibration
CTS 4.1.3.2.1.b
JFD-4
DOC L.4

The ITS retains the CTS SR to perform an RPI Channel Calibration, rather than adopt the STS SR to verify RPI agreement with the group demand position indication over the entire range of rod travel, due to plant-specific thermal drift characteristics.

Comment: The CTS SR frequency of 18 months is also retained. VEPCO should adopt the STS SR frequency of “once prior to criticality after each removal of the reactor head.”

RAI 3.1.8-1

ITS 3.1.8 Primary Grade Water Flow Path Isolation Valves
CTS 3.1.1.3.2 Boron Dilution Valve Position
Terminology
DOC A.2

The ITS retains the CTS requirements on Primary Grade Water Flow Path Isolation Valves, including the terminology to “... secure in the closed position ...”.

Comment: While the term “secure” is a common and accepted term, it would be useful to have some discussion in the Bases on the precise definition.

SECTION 3.2 - POWER DISTRIBUTION LIMITS

RAI 3.2.1-1

ITS 3.2.1 Heat Flux Hot Channel Factor ($F_Q(Z)$)
STS 3.2.1 Heat Flux Hot Channel Factor ($F_Q(Z)$)
Insert A.1 to Condition A Required Actions

The ITS provides a plant-specific revision to STS 3.2.1 Heat Flux Hot Channel Factor ($F_Q(Z)$). STS Conditions A and B are combined due to the plant-specific methodology for calculating $F_Q(Z)$.

Comment: In combining STS Conditions A and B, the ITS utilizes an “OR” logical connector between Required Actions A.1 and A.2.1. The logical connector should be an “AND.”

RAI 3.2.2-1

ITS Bases 3.2.2 Nuclear Enthalpy Rise Hot Channel Factor ($F_{\Delta}^N H$)
ITS 3.2.2 Required Actions
STS 3.2.2 Nuclear Enthalpy Rise Hot Channel Factor ($F_{\Delta}^N H$), Bases
Incorporation of TSTF-240 into the ITS

The ITS adopts TSTF-240, which is not approved.

Comment: TSTF-240 modifies the “A” Required Actions, and associated Bases. TSTF-240 was not approved because it deleted relevant information in the Bases. The actual changes to the Required Actions are acceptable. The information in the deleted A.1.1 Bases paragraph should be retained.

RAI 3.2.4-1

ITS 3.2.4 Quadrant Power Tilt Ratio (QPTR)
STS 3.2.4 QPTR
Incorporation of TSTF-109 into the ITS

The ITS incorrectly incorporates approved TSTF-109.

Comment: TSTF-109 modifies the Completion Time to STS Required Action A.3. The ITS incorrectly incorporates this change to the ITS Required Action A.2 Completion Time. The change has been correctly incorporated into the Bases.

SECTION 3.9 - REFUELING OPERATIONS

RAI 3.9.2-1

ITS 3.9.2 Primary Grade Water Flow Path Isolation Valves - MODE 6
STS 3.9.2 Unborated Water Source Isolation Valves
ITS/STS 1.3 Completion Times
JFD-2

The ITS deletes the STS Note allowing “separate condition entry,” referencing ITS/STS 1.3 on Completion Times.

Comment: The note should be retained. ITS/STS 1.3 does not support the justification provided in JFD-2. ITS/STS 1.3 provides a discussion of both of these exact cases, with and without the Note allowing “separate condition entry.”

RAI 3.9.2-2

ITS 3.9.2 Primary Grade Water Flow Path Isolation Valves - MODE 6

STS 3.9.2 Unborated Water Source Isolation Valves

ITS SR 3.9.2.1

JFD-6

The ITS deletes the STS SR 3.9.2.1 frequency of 31 days, replacing it with “Within 15 minutes following a boron dilution or makeup activity.” JFD-6 indicates that the ITS SR 3.9.2.1 frequency is a “more frequent verification of valve position,” and that it “eliminates the need for the ISTS Condition Note ...”.

Comment: The ITS SR 3.9.2.1 frequency may or may not be more frequent than the STS frequency of 31 days. The deleted STS Condition Note has the effect of requiring the SR following a boron dilution or makeup activity. VEPCO should adopt the STS 31-day SR frequency, in addition to retaining the ITS SR frequency.

RAI 3.9.4-1

ITS 3.9.4 Containment Penetrations

STS 3.9.4 Containment Penetrations

ITS 3.9.4 Applicability Note 1

DOCs A.3 and LA.1

JFD-2

A note is added to the ITS Applicability indicating that the containment penetration requirements are not applicable to the 7-ft containment personnel air lock, based upon the Fuel Handling Accident (FHA) Analysis assuming that both doors of the 7-ft containment personnel air lock doors are open. As a result, TSTF-68 changes are not adopted.

Comment: While the FHA analysis may assume the 7-ft containment personnel air lock doors are open, the CTS makes no exception for them. TSTF-68 allows both doors in personnel air lock doors to be open, as long as they are capable of being closed. VEPCO should delete this note and adopting TSTF-68. As written, this is a beyond-scope change and will require staff review.

RAI 3.9.4-2

ITS 3.9.4 Containment Penetrations

STS 3.9.4 Containment Penetrations

ITS SR 3.9.4.2

STS SR 3.9.4.2

CTS 4.9.4

DOCs LA.1

JFD-2

The ITS deleted the STS SR requirement to verify that each containment purge and exhaust valve actuates “on an actual or simulated actuation signal.” The CTS requires each containment purge and exhaust valve be determined to be capable of being closed automatically.

Comment: VEPCO should retain the STS SR requirements. As written, this is a beyond-scope change and will require NRC staff review.

RAI 3.9.5-1

ITS 3.9.5 Residual Heat Removal (RHR) and Coolant Circulation - High Water Level

STS 3.9.5 RHR and Coolant Circulation - High Water Level

ITS 3.9.5 LCO Note

TSTF-153

The ITS adopts TSTF-153, rewording the LCO Note.

Comment: TSTF-153 was mistakenly approved. VEPCO should remove the TSTF-153 changes.

RAI 3.9.6-1

ITS 3.9.6 Residual Heat Removal (RHR) and Coolant Circulation - Low Water Level

STS 3.9.6 RHR and Coolant Circulation - Low Water Level

ITS SR 3.9.6.2 Note

STS SR 3.9.6.2

JFD-2

The ITS SR 3.9.6.2 adds a Note not present in the STS SR 3.9.6.2 and not addressed by TSTF-265.

Comment: While it appears that this note is similar to that added by TSTF-265 in STS SR 3.4.5.3, TSTF-265 does not add it to SR 3.9.6.2. Explain why the note is needed in SR 3.9.6.2.