

# VERMONT YANKEE NUCLEAR POWER CORPORATION

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April 15, 2002  
BVY 02-23

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

References: (a) American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code; Code Case N-566-1, "Corrective Action for Leakage Identified at Bolted Connections, Section XI, Division 1."

Subject: Vermont Yankee Nuclear Power Station  
License No. DPR-28 (Docket No. 50-271)  
Use of ASME Code Case N-566-1 at Vermont Yankee Nuclear Power Station

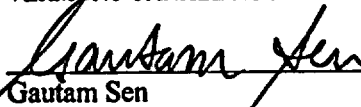
10CFR50.55a(a)(3)(i) allows use of proposed alternatives to ASME Code requirements that would provide an acceptable level of quality and safety, subject to the approval of the Director of the Office of Nuclear Reactor Regulation. Reference (a) provides an alternative method for taking corrective action when leakage is identified at bolted connections. Vermont Yankee (VY) proposes to follow Reference (a) as an alternative to the code requirements. Attachment 1 provides the assessment of the requested relief and Attachment 2 provides proposed Relief Request P-4.

To support our upcoming fall refueling outage, VY requests approval by September 5, 2002. This request is similar to one submitted by Nine Mile Point Nuclear Station that was approved by the staff on November 13, 2000 (TAC No. MA8596).

We trust that the information provided will enable you to complete your review of our request; however, should you have any questions on this matter, please contact Mr. Jim DeVincentis at (802) 258-4236.

Sincerely,

VERMONT YANKEE NUCLEAR POWER CORPORATION



Gautam Sen  
Licensing Manager

Attachments

cc: USNRC Region I Administrator  
USNRC Resident Inspector - VYNPS  
USNRC Project Manager - VYNPS  
VT Department of Public Service

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**Docket No. 50-271**  
**BVY 02-23**

**Attachment 1**

**Vermont Yankee Nuclear Power Station**

**Basis for Request for Alternative Testing per 10CFR50.55a(a)(3)(i)**

**Use of Code Case N-566-1**

### Introduction

The following supporting information and safety assessment provide the basis for the use of Code Case N-566-1, Corrective Action for Leakage Identified at Bolted Connections, Section XI, Division 1, in lieu of the requirements of ASME Section XI, IWA-5250(a)(2), 1986 Edition with no Addenda. Code Case N-566-1 is included in the draft of Regulatory Guide 1.147, Revision 13 (DG-1091) and recommended for approval without conditions. The proposed alternative will provide an acceptable level of quality and safety.

10CFR50.55a requires inservice inspections (ISI) of certain nuclear power facility components in accordance with Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Code and applicable addenda, except where alternatives have been authorized or relief has been granted by the NRC.

### VY Licensing Basis

ASME Section XI, 1986 Edition with no Addenda, is the Code of record for the Third Inservice Inspection Interval that commenced on September 1, 1993. IWA-5250(a)(2) requires, as a corrective action for leakage at bolted connections, the removal of bolting, a VT-3 visual examination for corrosion, and an evaluation in accordance with IWA-3100 be conducted.

Presently, VY has an approved Relief Request, P-2 (NVY 95-87 dated June 14, 1995, TAC No. M88344), to use IWA-5250(a)(2) of ASME Section XI, 1992 Edition with no Addenda, in lieu of the requirements of IWA-5250(a)(2) of the 1986 Edition with no Addenda. If Relief Request P-4 is approved, Relief Request P-2 will be considered superceded and only the requirements of Code Case N-566-1 will apply.

### Proposed Alternative

Pursuant to 10CFR50.55a(a)(3)(i), VY proposes to implement the provisions of Code Case N-566-1, "Corrective Action for Leakage Identified at Bolted Connections," as alternative to the requirements of IWA-5250(a)(2) of the Code.

### Basis for Relief

VY requests approval of use of Code Case N-566-1 pursuant to 10CFR50.55a(a)(3)(i) on the basis that the alternative would provide an acceptable level of quality and safety. Removal of pressure retaining bolting at mechanical connections for the VT-3 visual examination and subsequent evaluation in locations where leakage has been identified is not always the most prudent course of action to determine the condition of the bolting for the cause of the leak. The IWA-5250(a)(2) requirement to remove, examine, and evaluate bolting in this situation does not allow consideration of other factors, which may indicate the condition of mechanical joint bolting.

**Requested Authorization**

VY requests the authorization to perform an alternative to the Code-required bolting removal. If evidence of leakage is identified during a system pressure test of Class 1, 2, and 3 systems, corrective action will be taken in accordance with Code Case N-566-1.

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**Attachment 2**

**Vermont Yankee Nuclear Power Station**

**In-service Inspection Program Relief Request P- 4**

## INSERVICE INSPECTION PROGRAM PRESSURE TEST RELIEF REQUEST

**RELIEF REQUEST NO:** P-4

**REFERENCE CODE:** ASME Section XI, 1986 Edition with No Addenda

**COMPONENT:** Pressure Retaining Components, Bolted Connections

**ASME CODE CLASS:** 1, 2, 3

**CATEGORY:** B-P, C-H, D-A, D-B, D-C

**ITEMS:** B15.10, B15.11, B15.50, B15.51, B15.60, B15.61, B15.70, B15.71  
C7.10, C7.20, C7.30, C7.40, C7.50, C7.60, C7.70, C7.80  
D1.10, D2.10, D3.10

**EXAMINATION REQUIREMENT:** ASME Section XI, IWA-5250(a)(2), states that, "if leakage occurs at a bolted connection, the bolting shall be removed, VT-3 visually examined for corrosion, and evaluated in accordance with IWA-3100;"

**CODE RELIEF REQUEST:** Relief is requested from the corrective measures of IWA-5250(a)(2).

**BASIS FOR REQUESTING RELIEF:** In a bolted connection, if leakage occurs, not all of the bolting may be wetted. Removal of all bolting at a leaking connection potentially requires the plant to be shutdown. This is not always a prudent decision and may cause undue hardship without a compensating increase in the level of quality or safety.

Code Case N-566-1 provides an alternative to IWA-5250(a)(2) and it's use is proposed below.

**PROPOSED ALTERNATIVE EXAMINATION:** If leakage occurs at a bolted connection, the required actions specified as (a) or (b) shall be met in accordance with Code Case N-566-1, "Corrective Action for Leakage Identified at Bolted Connections, Section XI, Division 1." Use of the Code Case will provide reasonable assurance of structural integrity based on maintaining the applicable Code safety margins.

## SUMMARY OF VERMONT YANKEE COMMITMENTS

**BVY NO.: 02-23 "Use of ASME Code Case N-566-1 at Vermont Yankee Nuclear Power Station"**

The following table identifies commitments made in this document by Vermont Yankee. Any other actions discussed in the submittal represent intended or planned actions by Vermont Yankee. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Licensing Manager of any questions regarding this document or any associated commitments.

COMMITMENTS	COMMITTED DATE OR "OUTAGE"
None	N/A