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Docket No. 50-271  
BVY 05-050  
TAC No. MC5850

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Subject: **Vermont Yankee Nuclear Power Station**  
**Request to use the ASME Code Section XI, 2001 Edition, through the 2003**  
**Addenda, Subparagraph IWA-4540(a) Requirements for Pressure Testing –**  
**Response to Request for Additional Information**

- References:
- 1) U.S. Nuclear Regulatory Commission Memorandum from R. Ennis to D. Roberts, "Vermont Yankee Nuclear Power Station, Draft Request for Additional Information (TAC No. MC5850)," dated April 8, 2005.
  - 2) Entergy letter to U.S. Nuclear Regulatory Commission, "Vermont Yankee Nuclear Power Station, Request to use the ASME Boiler and Pressure Vessel Code Section XI, 2001 Edition, through the 2003 Addenda, Subparagraph IWA-4540(a) Requirements for Pressure Testing," dated February 7, 2005.

This letter responds to Nuclear Regulatory Commission's (NRC's) request for additional information (Reference 1) regarding the request by Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (Entergy) to use the 2001 Edition, including the 2003 Addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code), Subparagraph IWA-4540(a) (Reference 2) for the pressure testing requirements of Classes 1, 2, and 3 Items following repair/replacement activities performed by welding or brazing on a pressure-retaining boundary at the Vermont Yankee Nuclear Power Station (VYNPS).


Attachment 1 to this letter provides Entergy's response to the NRC's request for additional information in Reference 1. Subsequent to the receipt of the draft RAI, a conference call was held with the NRC staff for further clarification on April 12, 2005. The information provided herein is consistent with the clarifications reached during that discussion.

There are no new regulatory commitments contained in this submittal.

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If you have any questions or require additional information, please contact me at (802) 258-4236.

Sincerely,



James M. DeVincentis  
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Attachment (1)

cc: Mr. Richard B. Ennis, Project Manager  
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## **ATTACHMENT 1**

### **Vermont Yankee Nuclear Power Station**

**Request to use the ASME Code Section XI, 2001 Edition, through the 2003  
Addenda, Subparagraph IWA-4540(a) Requirements for Pressure Testing –  
Response to Request for Additional Information**

## **RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

Total number of pages in Attachment 1 (excluding this cover sheet) is 3.
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**VERMONT YANKEE NUCLEAR POWER STATION  
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION  
RELATED TO REQUEST TO USE THE ASME CODE SECTION XI, 2001 EDITION,  
THROUGH THE 2003 ADDENDA, SUBPARAGRAPH IWA-4540(A) REQUIREMENTS  
FOR PRESSURE TESTING**

By letter dated February 7, 2005, Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (Entergy or licensee) requested the Nuclear Regulatory Commission's (NRC's) approval to use a more recent edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) for the pressure testing requirements of Class 1, 2, and 3 items following repair/replacement activities performed by welding or brazing on a pressure-retaining boundary at Vermont Yankee Nuclear Power Station (VYNPS).

This attachment provides Entergy's response to the NRC staff's request for additional information (RAI) in order to provide clarification. Subsequent to the receipt of the draft RAI, a conference call was held with the NRC staff for further clarification on April 12, 2005. The information provided herein is consistent with the clarifications reached during that discussion. The individual RAIs are stated as provided in NRC's memorandum dated April 8, 2005.

**RAI 1**

Title 10 of the Code of Federal Regulations (10 CFR), Section 50.55a(g)(4)(iv), states that inservice examination of components and system pressure tests may meet the requirements set forth in subsequent editions and addenda of the ASME Code, Section XI that are incorporated by reference in paragraph (b) of 10 CFR 50.55a, subject to the limitations and modifications listed therein, and subject to Commission approval. The regulation also states that portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met.

Pursuant to 10 CFR 50.55a(g)(4)(iv), the licensee has requested in its letter dated February 7, 2005, to use the 2001 Edition through the 2003 Addenda of the ASME Code, Section XI, Article IWA-4540, subparagraph (a), as applicable, for pressure testing of Class 1, 2, and 3 items following repair/replacement activities performed by welding or brazing on a pressure-retaining boundary. Specifically, the licensee has proposed to implement the requirements of the 2003 Addenda of the ASME Section XI Code, Article IWA-4540, subparagraph (a) in the VYNPS Repair/Replacement Program.

The licensee's request to use the subsequent edition and addenda for the ASME Code subparagraph discussed above did not include the related requirements of the 2003 Addenda of the ASME Code, Section XI, Article IWA-4540, subparagraphs (c) and (d), which read as follows:

- (c) Replacement components and appurtenances shall be pressure tested in accordance with the Construction Code selected for use in accordance with IWA-4221.

- (d) Brazed joints and welds in replacement parts and piping subassemblies, fabricated by the Repair/Replacement Organization, or fabricated in accordance with the Construction Code without a hydrostatic pressure test, shall be tested as required by IWA-4540(a).

The licensee's request also did not include the related requirements of Article IWA-4540, subparagraph (b) in the 2003 Addenda of the ASME Code, Section XI. However, the licensee's Code of Record for the Fourth Inservice Inspection Interval at VYNPS, the 1998 Edition through the 2000 Addenda of the ASME Code, Section XI contains requirements in Article IWA-4540, subparagraph (b) that are identical to those in the corresponding subparagraph in the 2003 Addenda of the ASME Code, Section XI.

Please clarify your pressure testing program for Class 1, 2, and, 3 systems and components following repair/replacement activities which specifically involve the use of replacement components and/or piping subassemblies containing welded or brazed joints that make up part of a pressure-retaining boundary. Please discuss whether you intend to use all requirements related to the 2003 Addenda of the ASME Code, Section XI, Article IWA-4540, subparagraph (a), specifically subparagraphs (c) and (d) of IWA-4540 in the 2003 Addenda.

#### **Response to RAI 1**

Entergy's request did not include the related requirements of IWA-4540 subparagraphs (b), (c), and (d) of the 2003 Addenda of the ASME Code, Section XI, for the reasons explained below:

Subparagraph (b) – It was determined that for VYNPS, invoking Article IWA-4540, subparagraph (b) of the 2003 Addenda to the ASME Code, Section XI, was neither beneficial nor required, since Article IWA-4540 subparagraph (b) of the 1998 Edition through the 2000 Addenda of the ASME Code, Section XI (Code of Record), contains the identical requirements stated in Article IWA-4540, subparagraph (b) of the 2003 Addenda of the ASME Code, Section XI.

Subparagraph (c) – It was determined that subparagraph (c) is a re-emphasis of Article IWA-4221. The 1998 Edition through the 2000 Addenda of the ASME Code, Section XI (Code of Record) does not contain a similar subparagraph; however, Article IWA-4221 is implemented at VYNPS specifically as required by the omitted subparagraph (c) of the 2003 Addenda of the ASME Code, Section XI.

Subparagraph (d) – It was determined that subparagraph (d) provides a clarifying statement, for repairs and replacements by welding or brazing, to use Article IWA-4540, subparagraph (a) in lieu of conducting a hydrostatic test. Without Article IWA-4540, subparagraph (d) of the 2003 Addenda of the ASME Code, Section XI, at VYNPS, Entergy could have implemented Article IWA-4540, subparagraph (a) of the 2003 Addenda of the ASME Code, Section XI, with minimal impact, thus it was omitted.

In conclusion, to provide clarity of purpose, Entergy requests to adopt the complete Article IWA-4540 of the 2003 Addenda of the ASME Code, Section XI for VYNPS.

**RAI 2**

Please clarify the ASME Code, Section XI Edition and Addenda that VYNPS proposes to use for the requirements of Article IWA-5000 that are referenced by Article IWA-4540, subparagraph (a).

**Response to RAI 2**

For VYNPS, Entergy intends to use Article IWA-5000 of the 1998 Edition through the 2000 Addenda of the ASME Code, Section XI (Code of Record), including augmenting requirements of 10CFR50.55a(b)(2)(xx) for hold times.