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July 27, 2004

Docket No. 50-271  
BVY 04-071  
TAC No. MC0761

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

Subject: **Vermont Yankee Nuclear Power Station**  
**Technical Specification Proposed Change No. 263 – Supplement No. 9**  
**Extended Power Uprate – Revised Containment Overpressure Envelope**

Reference: 1) Entergy Nuclear Operations, Inc. letter to U.S. Nuclear Regulatory Commission, "Technical Specification Proposed Change No. 263 – Supplement No. 8, Extended Power Uprate – Response to Request for Additional Information, BVY 04-058, July 2, 2004

Reference (1) provided a response to an NRC staff request for additional information (RAI) regarding the application by Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (Entergy) for a license amendment to increase the maximum authorized power level of the Vermont Yankee Nuclear Power Station (VYNPS) from 1593 megawatts thermal (MWt) to 1912 MWt (i.e., an extended power uprate). This letter corrects certain information provided in Reference (1) in response to RAIs SPSB-C-23 and SPSB-C-26. A telecon held on July 7, 2004, between NRC and Entergy provided preliminary notification of this change.

Revised Power Uprate Safety Analysis Report (PUSAR) Figure 4-6 was provided in response to RAI SPSB-C-23. In support of the response to RAI SPSB-C-26, Entergy provided VYNPS calculations VYC-0808, Rev. 6 and VYC-2314, Rev. 0 in Attachment 4 to Reference (1) as Exhibits 1 and 2, respectively. The PUSAR figure and calculations were subsequently changed due to a calculational input that was deemed to be nonconservative for the purposes of those calculations.

Certain inputs to the aforementioned calculations were the result of containment response analyses performed by the nuclear steam supply system supplier for VYNPS extended power uprate. For pump net positive suction head (NPSH) purposes a design basis accident containment spray thermal mixing efficiency of 100% should be used. This provides a conservative containment response, i.e., minimizes available NPSH when credit is taken for containment overpressure (COP). However, the calculations that were provided in Reference (1) were based on containment analyses that used a mechanistic heat transfer efficiency that is not sufficiently conservative for this application. Upon further review and for this application, it is

AP01

appropriate to include the additional margin in the subject calculations by assuming a thermal mixing efficiency of 100%. This does not affect the current licensing basis safety analyses, which do not credit containment overpressure in determining required NPSH.

Changes have been incorporated to the subject calculations and are provided in the attachments to this letter. The impact of this change on available peak containment pressure is very small (approximately 0.2 – 0.3 psi).

Attachment 1 provides the revised PUSAR Figure 4-6 that was provided in response to RAI SPSB-C-23. This figure, which derives from calculation VYC-0808, pictorially illustrates that available COP conservatively envelopes COP required for acceptable RHR and core spray pump NPSH during a LOCA.

Attachment 2 provides Calculation Change Notice (CCN) 06 to calculation VYC-0808, Revision 6, "Core Spray and Residual Heat Removal Pump Net Positive Suction Head Margin Following a Loss of Coolant Accident or Anticipated Transient Without Scram."

Attachment 3 provides CCN 02 to calculation VYC-2314, Revision 0, "Minimum Containment Overpressure for Non-LOCA Events."

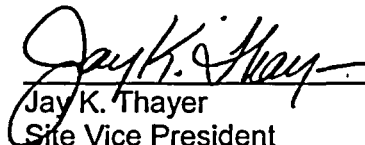
This supplement to the license amendment request does not change the scope or conclusions in the original application, nor does it change Entergy's determination of no significant hazards consideration. There are no new commitments contained within this submittal.

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

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 27, 2004.

Sincerely,



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Jay K. Thayer  
Site Vice President  
Vermont Yankee Nuclear Power Station

Attachments (3)

cc: (see next page)

cc:

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Attachment 1

Vermont Yankee Nuclear Power Station

Proposed Technical Specification Change No. 263 – Supplement No. 9

Extended Power Uprate

Revised Containment Overpressure Envelope

Revised PUSAR Figure 4-6

Total number of pages in Attachment 1  
(excluding this cover sheet) is 1.

Figure 4-6 Revised

