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January 17, 2007

BVY 07-006

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Washington, DC 20555-0001

- References:
- (a) Global Nuclear Fuel Report, 0000-0035-6435-SRLR, Revision 0, Supplemental Reload Licensing Report for Vermont Yankee Nuclear Power Station Reload 24/Cycle 25 (at Current Licensed Power Level of 1593 MW), September 2005.
  - (b) Global Nuclear Fuel Report, 0000-0035-6443-SRLR, Revision 0, Supplemental Reload Licensing Report for Vermont Yankee Nuclear Power Station Reload 24/Cycle 25 (with Extended Power Uprate), December 2005.
  - (c) Letter, S.A. Richards (USNRC) to J.F. Klapproth (GE), Review of NEDE-23785P, Volume III, Supplement 1, Revision 1, "GESTR-LOCA and SAFER Models for Evaluation of Loss of Coolant Accident, Volume III, Supplement 1, Additional Information for Upper Bound PCT Calculation," February 1, 2002.
  - (d) Entergy Nuclear Northeast Letter, James M. DeVincentis (Entergy) to USNRC, Vermont Yankee Nuclear Power Station 10CFR50.46(a)(3)(ii) Annual Report for 2005, BVY 06-002, January 23, 2006.
  - (e) GE Nuclear Energy Report, GE-NE-0000-0015-5477-01, Revision 1, Project Task Report Entergy Nuclear Operations Incorporated Vermont Yankee Nuclear Power Station Extended Power Uprate Task T0407: ECCS-LOCA SAFER/GESTR, September 2004.
  - (f) Letter, Richard Ennis (USNRC) to Michael Kansler (Entergy), "Vermont Yankee Nuclear Power Station - Issuance of Amendment Re: Extended Power Uprate," NPY 06-028, dated March 2, 2006.

**Subject: Vermont Yankee Nuclear Power Station  
License No. DPR-28 (Docket No. 50-271)  
10CFR50.46(a)(3)(ii) Annual Report for 2006**

This letter is to report, in accordance with 10CFR50.46(a)(3)(ii), changes in peak cladding temperature (PCT) for the Vermont Yankee (VY) Emergency Core Cooling System (ECCS) Loss of Coolant Accident (LOCA) analysis. This annual report covers VY Cycle 25 from January 2006 to December 2006.

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For Cycle 25, VY used the General Electric (GE) SAFER/GESTR methodology for the evaluation of the ECCS/LOCA. The results are summarized in References (a) and (b).

In early 2006, VY implemented a change in its rated power level from 1593 MWth to 1912 MWth in accordance with Reference (f). The SAFER/GESTR-LOCA analysis is based on a power level of 1912 MWth. Analysis at this power level bounds operation at lower power levels. The GE methodology has been approved by the NRC in Reference (c).

The licensing basis PCT, calculated for the GE14 fuel type VY currently has loaded in its core, including corrections through 2005, is documented in Reference (d).

The following table updates the results to reflect subsequent errors identified in the methodology for the current VY fuel type.

**Summary of 10CFR50.46 Errors for Vermont Yankee (2006)**

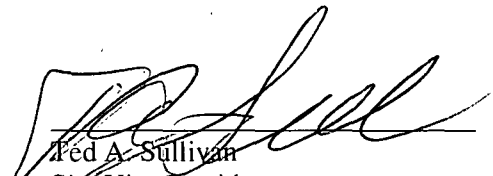
<b>10CFR50.46 Error Identification</b>	<b>10CFR50.46 Error Description</b>	<b>Licensing Basis Delta PCT (degF) for GE14</b>
2006-001	Impact of Top Peaked Power Shape for Small Break LOCA Analysis	0
Total Delta PCT		0
	Previous Licensing Basis PCT from References (d) and (e)	1960
	Adjusted Licensing Basis PCT	1960

Since the PCT for the GE14 fuel type is well within the acceptance criterion of 10CFR50.46(b)(1), there is no need for re-analysis or other action per 10CFR50.46(a)(3)(ii).

There are no new regulatory commitments being made in this submittal.

If you have any questions concerning this submittal, please contact Mr. David J. Mannai at (802) 451-3304.

Sincerely,

  
 Ted A. Sullivan  
 Site Vice President  
 Vermont Yankee Nuclear Power Station

cc: Mr. Samuel J. Collins  
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