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January 23, 2006

BVY 06-002

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

References: (a) Global Nuclear Fuel Report, 0000-0016-6419-SRLR, Rev. 1, Supplemental Reload Licensing Report for Vermont Yankee Nuclear Power Station, Reload 23/Cycle 24, November 2004.

(b) Global Nuclear Fuel Report, 0000-0016-6419-SRLR, Rev. 2, Supplemental Reload Licensing Report for Vermont Yankee Nuclear Power Station, Reload 23/Cycle 24, August 2005.

(c) Global Nuclear Fuel Report, 0000-0035-6435-SRLR, Rev. 0, Supplemental Reload Licensing Report for Vermont Yankee Nuclear Power Station, Reload 24/Cycle 25, September 2005.

(d) 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.

(e) Report, GE, Entergy Nuclear Operation Incorporated Vermont Yankee Nuclear Power Station Extended Power Uprate – Task T0407 – ECCS-LOCA SAFER/GESTR, GE-NE-0000-0015-5477-01, July 2003.

Subject: **Vermont Yankee Nuclear Power Station**
License No. DPR-28 (Docket No. 50-271)
10CFR50.46(a)(3)(ii) Annual Report for 2005

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 24, from January 2005 to October 2005 and Cycle 25 from November 2005 to December 2005.

For Cycle 24 and Cycle 25, VY used the General Electric (GE) SAFER/GESTR methodology for the evaluation of the ECCS/LOCA. The results of the analysis are summarized in References (a) through (c).

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The SAFER/GESTR-LOCA analysis is based on a power level of 1912 MWth. This power level bounds any lower power levels. The GE methodology has been approved by the NRC in Reference (d).

The Licensing Basis PCT calculated for the three fuel types and including the 10CFR50.46 corrections up to notification number 2003-03 is documented in Reference (e).

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

Summary of 10CFR50.46 Errors for Vermont Yankee (2005)

10CFR50.46 Error Identification	10CFR50.46 Error Description	Licensing Basis ΔPCT (°F)		
		GE-14	GE-13	GE-9NB
2003-05	Impact of Postulated Hydrogen-Oxygen Recombination, issued on 5/13/2004 and revised on 6/18/2004	0	0	0
Total ΔPCT (°F)		0	0	0
Previous Licensing Basis PCT [from Reference (a)]		1960° F	1940° F	1940° F
Adjusted Licensing Basis PCT		1960° F	1940° F	1940° F

The SAFER/GESTR-LOCA analysis results for GE-9NB fuel are bounded by GE-13 and thus are less than the value documented above

Since the PCT for GE-14, GE-13 and GE-9NB fuel types are well within the acceptance criterion of 50.46(b)(1), there is no need for reanalysis or other action per 50.46(a)(3)(ii).

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

If you have any questions concerning this submittal, please contact me at (802) 258-4236.

Sincerely,

FOR

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Manager, Licensing
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cc: Mr. Samuel J. Collins
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