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**Robert J. Wanczyk**  
Licensing Manager

January 10, 2011

BVY 11-003

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

SUBJECT: 10CFR50.46(a)(3)(ii) Annual Report for 2010  
Vermont Yankee Nuclear Power Station  
Docket No. 50-271  
License No. DPR-28

- REFERENCES:
- (a) Global Nuclear Fuel Report, 0000-0078-8270-SRLR, Revision 0, Supplemental Reload Licensing Report for Vermont Yankee Nuclear Power Station Reload 26 Cycle 27, dated September 2008
  - (b) Global Nuclear Fuel Report, 0000-0100-8140-SRLR, Revision 2, Supplemental Reload Licensing Report for Vermont Yankee Nuclear Power Station Reload 27 Cycle 28, dated May 2010
  - (c) Letter, Entergy to USNRC, Vermont Yankee Nuclear Power Station 10CFR50.46(a)(3)(ii) Report, BVY 10-033, dated June 7, 2010

Dear Sir or Madam:

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 Cycles 27 and 28 from January 2010 to December 2010.

For Cycles 27 and 28, VY used the General Electric (GE) SAFER/GESTR methodology for the evaluation of the ECCS/LOCA. The results are summarized and reported in References (a) and (b).

The licensing basis PCT, calculated for the GE14 and GNF2 fuel types VY currently has loaded in its core, including corrections through May 2010, is documented in Reference (c).

There were no new changes or error reports identified for VY fuel in 2010.

A002  
NRC

**Summary of 10CFR50.46 Changes/Errors for Vermont Yankee (2010)**

10CFR50.46 Change/Error Identification	10CFR50.46 Change/Error Description	Licensing Basis Delta PCT (degF) for:	
		GE14	GNF2
None	N/A	N/A	N/A
	Total Delta PCT	0	0
	Previous Licensing Basis PCT from Reference (c)	1960	2060
	Adjusted Licensing Basis PCT	1960	2060

Since the PCT for the GE14 and GNF2 fuel types are 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 me at (802) 451-3166.

Sincerely,



[RJW/JTM]

cc: Mr. William M. Dean, Region 1 Administrator  
U.S. Nuclear Regulatory Commission  
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Mr. James S. Kim, Project Manager  
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USNRC Resident Inspector  
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Ms. Elizabeth Miller, Commissioner  
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