



Entergy Nuclear Operations, Inc.
Vermont Yankee
P.O. Box 0250
320 Governor Hunt Road
Vernon, VT 05354
Tel 802 257 7711

David J. Mannai
Licensing Manager

January 14, 2010

BVY 10-001

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

Subject: Vermont Yankee Nuclear Power Station
License No. DPR-28 (Docket No. 50-271)
10CFR50.46(a)(3)(ii) Annual Report for 2009

- 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) Letter, Entergy to USNRC, Vermont Yankee Nuclear Power Station 10CFR50.46(a)(3)(ii) Annual Report for 2008, BVY 09-04, dated January 6, 2009

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 Cycle 27 from January 2009 to December 2009.

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

The licensing basis PCT, calculated for the GE14 fuel type VY currently has loaded in its core, including corrections through 2008, is documented in Reference (b).

In Cycle 26 VY loaded four GNF2 Lead Use Assemblies (LUAs) into the core. Since these assemblies were loaded as LUAs, the PCT change associated with these assemblies is not included in this annual report.

The following table updates the results to reflect subsequent changes to or errors identified in the methodology for the current VY fuel type. There were no new changes or error reports identified for VY fuel in 2009.

A002
NRK

Summary of 10CFR50.46 Changes/Errors for Vermont Yankee (2009)

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

Since the PCT for the GE14 fuel type is 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) 451-3304.

Sincerely,



[DJM/JYM]

cc: Mr. Samuel J. Collins, Region 1 Administrator
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

Mr. James S. Kim, Project Manager
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

USNRC Resident Inspector
Vermont Yankee Nuclear Power Station
320 Governor Hunt Road
Vernon, VT 05354

Mr. David O'Brien, Commissioner
VT Department of Public Service
112 State Street, Drawer 20
Montpelier, VT 05620-2601