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BVY 02-99

United States Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

- References:
- (a) Letter, VYNPS to USNRC, "10CFR50.46 (a) (3) (ii) Report of Changes to Calculated Peak Clad Temperature," BVY 02-91, dated November 18, 2002
  - (b) Report, 0000-0006-1823-SRLR, Rev. 0, "Supplemental Reload Licensing Report For Vermont Yankee Nuclear Power Station, Reload 22 Cycle 23," dated October 2002
  - (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," dated February 2002

Subject: **Vermont Yankee Nuclear Power Station**  
**License No. DPR-28 (Docket No. 50-271)**  
**10CFR50.46(a)(3)(ii) Annual Report for 2002**

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 Cycle 22 from January to October 2002 and Cycle 23 from October to December 2002.

VY recently completed a refueling outage and has begun operation with GE-14 fuel type. The three previous reloads used GE-13 and GE-9 fuel types. The licensing basis Peak Clad Temperature (PCT) calculated for GE-14 fuel is 1950°F and was reported in Reference (a). For Cycle 23, VY used the General Electric (GE) SAFER/GESTR methodology for the evaluation of the ECCS/LOCA. The results of the analysis are summarized in Reference (b). The GE methodology has been approved by the NRC in Reference (c).

The following table, from Reference (b), provides the annual summary of GE reported changes or errors identified in the methodology for all VY fuel types.

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Summary of 10CFR50.46 Errors for Vermont Yankee

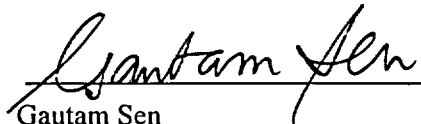
10CFR50.46 Error Identification	10CFR50.46 Error Description	Licensing Basis ΔPCT (°F)		
		GE-14 <sup>†</sup>	GE-13	GE-9NB
2000-01 Revision 1	Error in the shell outside diameter value of the steam separator in the SAFER basedeck for Vermont Yankee and time step error impact (Error 2000-01 includes error 2000-04)	N/A	-12	-12
2001-01	Error in accounting for the steam condensed when subcooled ECCS liquid is injected into the lower plenum	N/A	0	0
2001-02	Inconsistency in the vessel pressure rate equation	N/A	+10	+10
2002-01	Error in core spray injection elevation	N/A	+5	+5
2002-02	Impact of SAFER Bulk Water Level Error on the Peak Clad Temperature	N/A	+5	+5
Total ΔPCT (°F)		N/A	+8	+8
Original Licensing Basis PCT		1950°F	1850°F	1730°F
Adjusted Licensing Basis PCT		1950°F	1858°F	1738°F

<sup>†</sup> The errors summarized are not applied to the GE-14 since this fuel type was recently introduced at VY and the calculated licensing basis PCT addressed all these errors.

Since the PCTs for GE-14, GE-13 and GE-9 fuel types are well within the acceptance criterion of 10CFR50.46(b)(1), there is no need for reanalysis or other action per 10CFR50.46(a)(3)(ii). All other 10CFR50.46(b) criteria are met for these fuel types as well.

If you have any questions concerning this letter, please contact Mr. Jim DeVincentis at (802) 258-4236.

Sincerely,

  
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Gautam Sen  
Manager, Licensing

cc: USNRC Region 1 Administrator  
USNRC Resident Inspector  
USNRC Project Manager  
Vermont Department of Public Service

**SUMMARY OF VERMONT YANKEE COMMITMENTS**

BVY NO.: 02-99 10CFR50.46(a)(3)(ii) Annual Report for 2002

The following table identifies commitments made in this document by Vermont Yankee. Any other actions discussed in the submittal represent intended or planned actions by Vermont Yankee. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Licensing Manager of any questions regarding this document or any associated commitments.

COMMITMENT	COMMITTED DATE OR "OUTAGE"
None	N/A