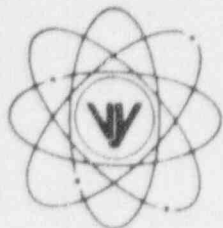


VERMONT YANKEE NUCLEAR POWER CORPORATION



Ferry Road, Brattleboro, VT 05301-7002

REPLY TO
ENGINEERING OFFICE
580 MAIN STREET
BOLTON, MA 01740
(508) 779-6711

December 11, 1996
BVY 96-157

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

References: Attached in Enclosure A

Subject: 1996 10CFR50.46(a)(3)(ii) Report for Vermont Yankee

The purpose of this letter is to report, in accordance with 10CFR50.46(a)(3)(ii), changes in peak cladding temperature (PCT) for Vermont Yankee's Emergency Core Cooling System (ECCS) Loss of Coolant Accident (LOCA) analysis. This analysis was performed using Yankee Atomic Electric Company's FROSSTEY-2/HUXY/RELAP5YA (BWR version) model, described in References (b) through (f) and approved by the NRC in References (g) through (j).

In Reference (k) Vermont Yankee reported a maximum PCT of 1778.1°F for Operating Cycle 18. During Cycle 18, LOCA evaluations were performed to assess the effect of each of the following changes:

- Revised instrument uncertainty on the ECCS low pressure permissive setpoint which resulted in a maximum PCT of 1780.5 F, a 2.4°F increase.
- Revised Recirculation pump discharge bypass valves position modelling which resulted in a maximum PCT of 1764.5°F, a 13.6°F reduction.
- Revised RHR minimum flow bypass valves modelling which resulted in a maximum PCT of 1793.9°F, a 15.8°F increase [Reference (l)].

These changes, taken singly or in the aggregate, did not constitute a "significant change" as defined in 10CFR50.46(a)(3)(i) and therefore were not previously reported.

The Cycle 19 calculations are described in YAEC-1935, "Vermont Yankee Cycle 19 Core Performance Analysis Report," which was provided to the NRC in Reference (m). For Cycle 19, the three changes described above, as well as a reduction in Core Spray system flow rate and cycle-specific changes in stored energy, scram reactivity and fuel conductivity for the higher-enriched GE-9B bundle type, were incorporated into the reload analysis evaluation model. These changes resulted in a maximum Cycle 19 PCT of 1801.7°F, 23.6°F higher than the Cycle 18 PCT reported in Reference (k).

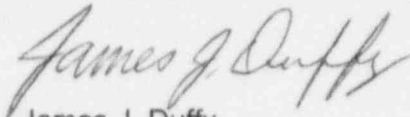
9612180062 961211
PDR ADOCK 05000271
P PDR

United States Nuclear Regulatory Commission
December 11, 1996
Page 2 of 2

We trust this information is satisfactory; however, should you have any questions, please do not hesitate to contact us.

Sincerely,

VERMONT YANKEE NUCLEAR POWER CORPORATION

A handwritten signature in cursive script, reading "James J. Duffy".

James J. Duffy
Licensing Engineer

Enclosure A: References

c: USNRC Region 1 Administrator
USNRC Resident Inspector - VYNPS
USNRC Project Manager - VYNPS

ENCLOSURE A

REFERENCES

- (a) License No. DPR-28 (Docket No. 50-271)
- (b) K. E. St. John, S. P. Schultz and R. P. Smith; Methods for the Analysis of Oxide Fuel Rod Steady-State Thermal Effects; YAEC-1912P-A (January 1995).
- (c) Report, "Vermont Yankee BWR Loss-of-Coolant Accident Licensing Analysis Method," YAEC-1547P-A, Revision 0, June 1986; Revision 1, July 1993.
- (d) Report, "RELAP5YA, A Computer Program for Light-Water Reactor System Thermal-Hydraulic Analysis," YAEC-1300P-A, Revision 0, October 1982 Revision 1, July 1993.
- (e) Letter, VYNPC to USNRC, "HUXY Computer Code Information for the Vermont Yankee BWR LOCA Licensing Analysis Method," FVY 87-63, dated June 4, 1987.
- (f) Report, "Vermont Yankee Loss-of-Coolant Accident Analysis," YAEC-1772, June 1993.
- (g) Letter, USNRC to VYNPC, "Approval of Use of Thermal Hydraulic Code RELAP5YA," NVEY 87-136, dated August 25, 1987.
- (h) Letter, USNRC to VYNPC, "Safety Evaluation for Vermont Yankee Nuclear Power Station, RELAP5YA LOCA Analysis Methodology," NVEY 92-192, dated October 21, 1992.
- (i) Letter, USNRC to VYNPC, "Vermont Yankee Nuclear Power Station, Safety Evaluation of FROSSTEY-2 Computer Code," NVEY 92-178, dated September 24, 1992.
- (j) Letter, USNRC to VYNPC, "HUXY Code Use," NVEY 91-26, dated February 27, 1991.
- (k) Letter, VYNPC to USNRC, "1995 Report in Accordance with 10CFR50.46(a)(3)(ii) for Vermont Yankee," BVY 95-141, dated December 29, 1995.
- (l) Letter, USNRC to VYNPC, "Vermont Yankee Special Inspection Report 50-271/96-07," NVEY 96-118, dated July 2, 1996
- (m) Letter, VYNPC to USNRC, "Vermont Yankee Cycle 19 Core Operating Limits Report," BVY 96-129, dated October 21, 1996