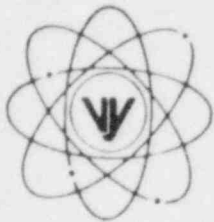


VERMONT YANKEE NUCLEAR POWER CORPORATION



RD 5, Box 169, Ferry Road, Brattleboro, VT 05301

2.C.2.1
FVY 82-81

REPLY TO:

ENGINEERING OFFICE

1671 WORCESTER ROAD
FRAMINGHAM, MASSACHUSETTS 01701
TELEPHONE 617-872-8100

July 6, 1982

United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Office of Nuclear Reactor Regulation
Mr. D. G. Eisenhut, Director
Division of Licensing

References: (a) License No. DPR-28 (Docket No. 50-271)
(b) Letter, T. J. Dente to D. G. Eisenhut, dated June 24, 1982
(c) Letter, VYNPC to USNRC, FVY 82-73, dated June 17, 1982
(d) Final Interim Hydrogen Control Rule Published in the
Federal Register on December 2, 1981, p.p. 58484-58486

Subject: Exemption Request

Dear Sir:

The purpose of this letter is to request an exemption from the requirements of 10CFR50.44(c)(3)(ii), which requires that Mark I containments that rely on purge/repressurization as the primary means of hydrogen control, be provided with either an internal hydrogen recombiner or the capability to install an external recombiner, following a postulated LOCA. We do not feel that the requirements of this regulation are applicable to Vermont Yankee.

The basis for this request results from the findings of a study entitled, "Generation and Mitigation of Combustible Gas Mixtures in Inerted BWR Mark I Containments - NEDO 22155," conducted by General Electric Company on behalf of the BWR Owners Group and submitted to the NRC via Reference (b). The significant findings of the study are as follows:

1. Net oxygen generation in a gamma/neutron flux occurs only in a boiling regime since radiolysis and recombination of H₂O occur at approximately equal rates in a subcooled regime.
2. Under conservatively postulated accident conditions, boiling can be stopped in 12 hours. This fixes the total amount of O₂ generated.
3. An inerted containment is maintained with a minimum amount of O₂, as regulated by Technical Specifications. If the O₂ generated per Item 2 above is added, the O₂-H₂ mixture will not contain sufficient O₂ to be combustible.
4. The BWR's covered by this study need not rely on the use of purge/repressurization as the primary means of controlling combustible gases, and consequently the regulation does not require hydrogen recombiner capability.

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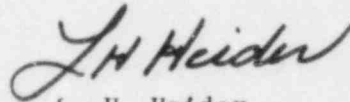
Mr. D. G. Eisenhut
June 29, 1982
Page 2

The results of the study indicate that the existing inerted BWR Mark I containment design is adequate for control of combustible gases without the need for hydrogen recombiners or containment venting. Therefore, in accordance with 10CFR50.12, Vermont Yankee hereby requests an exemption from the requirements of 10CFR50.44 (c)(3)(ii).

We believe the justification provided above forms an adequate basis for our request for exemption. We trust that this information will allow you to act on our request in a timely fashion. If you have any need for further information, please contact us.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION



L. H. Heider
Vice President

JBS/tan