

January 23, 1991

Docket No. 50-271

Mr. L. A. Tremblay
Licensing Engineer
Vermont Yankee Nuclear Power Corporation
580 Main Street
Bolton, Massachusetts 01740-1398

Dear Mr. Tremblay:

SUBJECT: HARDENED WETWELL VENT DESIGN AT VERMONT YANKEE NUCLEAR POWER STATION
(TAC NO. 74881)

By letter dated March 26, 1990, you stated your intention to install a hardened wetwell (torus) vent during the 1992 refueling outage. You also provided a description of the intended design which was to be performed pursuant to 10 CFR 50.59. Our Generic Letter 89-16 "Installation of a Hardened Wetwell Vent" encouraged licensees to install such vents in this manner. In a subsequent letter from you, dated December 31, 1990, you repeated your intention to install the vent during the March 1992 outage.

The staff has performed generic reviews of the hardened vent and prepared a cost-benefit analysis. We determined that the loss of core decay heat removal capability (TW) sequences of severe accidents were the sequences that benefitted most from the venting procedure. Under these conditions (TW), the initial vent will be relatively clean since the venting process is performed to delay core melt. Therefore, the timing of the first vent should not be that critical. This would be the case with the Vermont Yankee vent as the vent path would not be available until the burst disk pressure of 60 psig was reached. We also found that the most significant parameter that would improve accident mitigation was the hardening of the vent path.

Based on these considerations, the staff has concluded that the need to include operator flexibility in the vent design in addition to hardening the vent pathway is desirable, but not essential. Although we believe a design with operator flexibility, i.e. burst disk set at design basis accident pressure would be an improvement, we do not believe the additional benefits to be sufficient to make it a requirement of the vent design. Therefore, the staff has no objection to your proposed design and finds your commitment to install the vent during the Spring 1992 outage to be acceptable.

Original signed by Ronald Eaton for
Sincerely,

Richard H. Wessman, Director
Project Directorate I-3
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

cc: See next page

LA:PDY-3
MRushbrook
1/22/91

PD:PDI-3 MBF
MFairtile:mes
1/22/91

DIR/DST
ATHADANI
1/22/91

D:PDI-3
RHWessman
1/23/91

OFFICIAL RECORD COPY: VY TAC NO. 74881

9101250072 010123
PDR ADOCK 5000271
PDR

Mr. L. A. Tremblay, Senior Licensing Engineer

Vermont Yankee

cc:

Mr. J. Gary Weigand
President & Chief Executive Officer
Vermont Yankee Nuclear Power Corp.
R.D. 5, Box 169
Ferry Road
Brattleboro, Vermont 05301

Mr. John DeVincentis, Vice President
Yankee Atomic Electric Company
580 Main Street
Bolton, Massachusetts 01740-1398

Regional Administrator, Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

R. K. Gad, III
Ropes & Gray
One International Place
Boston, Massachusetts 02110

Mr. W. P. Murphy, Senior Vice President, Operations
Brattleboro, Vermont 05301

Vermont Yankee Nuclear Power Corporation Resident Inspector
R.D. 5, Box 169
Ferry Road
Brattleboro, Vermont 05301

Mr. George Sterzinger, Commissioner
Vermont Department of Public Service
120 State Street, 3rd Floor
Montpelier, Vermont 05602

Public Service Board
State of Vermont
120 State Street
Montpelier, Vermont 05602

Chairman, Board of Selectmen
Town of Vernon
Post Office Box 116
Vernon, Vermont 05353-0116

Mr. Raymond N. McCandless
Vermont Division of Occupational
and Radiological Health
Administration Building
Montpelier, Vermont 05602

Honorable James J. Easton
State of Vermont
109 State Street
Montpelier, Vermont 05602

James Volz, Esq.
Special Assistant Attorney General
Vermont Department of Public Service
120 State Street
Montpelier, Vermont 05602

G. Dana Bisbee, Esq.
Office of the Attorney General
Environmental Protection Bureau
State House Annex
25 Capitol Street
Concord, New Hampshire 03301-6937

Mr. James Pelletier
Vice President - Engineering
Vermont Yankee Nuclear Power Corp.
P.O. Box 169, Ferry Road
Brattleboro, Vermont 05301

Vermont Yankee Nuclear Power Station
U.S. Nuclear Regulatory Commission
P.O. Box 176
Vernon, Vermont 05354

John Traficante, Esq.
Chief Safety Unit
Office of the Attorney General
One Ashburton Place, 19th Floor
Boston, Massachusetts 02108

Adjuicatory File (2)
Atomic Safety and Licensing Board
Panel Docket
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Robert M. Lazo, Chairman
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. L. A. Tremblay

Vermont Yankee

cc:

Frederick J. Shon
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Jerry R. Kline
Administrative Judge
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

DISTRIBUTION:

~~Docket File~~ 50-271

NRC PDR

Local PDR

PDI-3 Reading

S. Varga

E. Greenman

M. Rushbrook

M. Fairtile

R. Wessman

OGC - 15 618

E. Jordan - MNBB 3701

ACRS (10) - P1 35

J. Johnson, Region I

A. Thadani