August 1, 2006

Mr. Michael Kansler
President
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601-1839

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION FOR THE REVIEW OF VERMONT YANKEE NUCLEAR POWER STATION LICENSE RENEWAL APPLICATION

Dear Mr. Kansler:

By letter dated January 25, 2006, as supplemented by letter dated March 15, 2006, the U.S. Nuclear Regulatory Commission (NRC) received the Entergy Nuclear Operations, Inc. application for renewal of Operating License No. DPR-28 for the Vermont Yankee Nuclear Power Station (VYNPS). The NRC staff is reviewing the information contained in the license renewal application and has identified, in the enclosure, areas where additional information is needed to complete the review. Specifically, the enclosed requests for additional information are from the NRC Project Team that performed the Aging Management Program, Aging Management Review, and Time-limited Aging Analysis audits at VYNPS.

Based on discussions with Mr. Jim DeVincentis of your staff, a mutually agreeable date for your response is within 30 days of the date of this letter. If you have any questions regarding this letter or if circumstances result in your need to revise the response date, please contact me at 301-415-4053 or by e-mail at jgr@nrc.gov.

Sincerely,

/RA/

Jonathan Rowley, Project Manager
License Renewal Branch B
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosure:
Requests for Additional Information

cc w/encl: See next page

August 1, 2006

Mr. Michael Kansler
President
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601-1839

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION FOR THE REVIEW OF VERMONT YANKEE NUCLEAR POWER STATION LICENSE RENEWAL APPLICATION

Dear Mr. Kansler:

By letter dated January 25, 2006, as supplemented by letter dated March 15, 2006, the U.S. Nuclear Regulatory Commission (NRC) received the Entergy Nuclear Operations, Inc. application for renewal of Operating License No. DPR-28 for the Vermont Yankee Nuclear Power Station (VYNPS). The NRC staff is reviewing the information contained in the license renewal application and has identified, in the enclosure, areas where additional information is needed to complete the review. Specifically, the enclosed requests for additional information are from the NRC Project Team that performed the Aging Management Program, Aging Management Review, and Time-limited Aging Analysis audits at VYNPS.

Based on discussions with Mr. Jim DeVincentis of your staff, a mutually agreeable date for your response is within 30 days of the date of this letter. If you have any questions regarding this letter or if circumstances result in your need to revise the response date, please contact me at 301-415-4053 or by e-mail at jgr@nrc.gov.

Sincerely,

/RA/

Jonathan Rowley, Project Manager
License Renewal Branch B
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosure:
Requests for Additional Information

cc w/encl: See next page

DISTRIBUTION: See next page

ADAMS Accession No.: **ML062151553**
Document Name: E:\Filenet\ML062150553.wpd

OFFICE	PM:RLRB:DLR	LA:DLR	BC:RLRB;DLR
NAME	JRowley	Iking	JZimmerman
DATE	07/ 14 /06	07/ 14 /06	08/ 1 /06

OFFICIAL RECORD COPY

Letter to Michael Kansler from Jonathan Rowley dated August 1, 2006

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF VERMONT YANKEE NUCLEAR POWER STATION LICENSE RENEWAL APPLICATION

HARD COPY
DLR R/F

E-MAIL:
JFair
RWeisman
AMurphy
RPettis
GGalletti
DShum
GBagchi
SSmith (srs3)
SDuraiswamy
YL (Renee) Li
RidsNrrDlr
RidsNrrDlrRlra
RidsNrrDlrRlrb
RidsNrrDe
RidsNrrDci
RidsNrreEemb
RidsNrrDeEeeb
RidsNrrDeEqva
RidsNrrDss
RidsNrrDnrl
RidsOgcMailCenter
RidsNrrAdes
DLR Staff

JEads
JRowley
RLaufer
JShea
CAnderson, RI
MSykes, RI
DScrenci, RI
MModes, RI
DPelton, Sr. Resident
MLemoncelli
RidsOpaMail

Vermont Yankee Nuclear Power Station

cc:

Regional Administrator, Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

Mr. David R. Lewis
Pillsbury, Winthrop, Shaw, Pittman, LLP
2300 N Street, N.W.
Washington, DC 20037-1128

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

Mr. James Volz, Chairman
Public Service Board
State of Vermont
112 State Street
Montpelier, VT 05620-2701

Chairman, Board of Selectmen
Town of Vernon
P.O. Box 116
Vernon, VT 05354-0116

Operating Experience Coordinator
Vermont Yankee Nuclear Power Station
320 Governor Hunt Road
Vernon, VT 05354

G. Dana Bisbee, Esq.
Deputy Attorney General
33 Capitol Street
Concord, NH 03301-6937

Chief, Safety Unit
Office of the Attorney General
One Ashburton Place, 19th Floor
Boston, MA 02108

Ms. Deborah B. Katz
Box 83
Shelburne Falls, MA 01370

Ms. Carla A. White, RRPT, CHP
Radiological Health
Vermont Department of Health
P.O. Box 70, Drawer #43
108 Cherry Street
Burlington, VT 05402-0070

Mr. James M. DeVincentis
Manager, Licensing
Vermont Yankee Nuclear Power Station
P.O. Box 0500
185 Old Ferry Road
Brattleboro, VT 05302-0500

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

Director, Massachusetts Emergency
Management Agency
ATTN: James Muckerheide
400 Worcester Rd.
Framingham, MA 01702-5399

Jonathan M. Block, Esq.
Main Street
P.O. Box 566
Putney, VT 05346-0566

Mr. John F. McCann
Director, Licensing
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

Mr. Gary J. Taylor
Chief Executive Officer
Entergy Operations
1340 Echelon Parkway
Jackson, MS 39213

cc:

Mr. John T. Herron
Sr. VP and Chief Operating Officer
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

Mr. Oscar Limpias
Vice President, Engineering
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

Mr. Christopher Schwartz
Vice President, Operations Support
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

Mr. Michael J. Colomb
Director of Oversight
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

Mr. Travis C. McCullough
Assistant General Counsel
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

Mr. Ted Sullivan
Site Vice President
Entergy Nuclear Operations, Inc.
Vermont Yankee Nuclear Power Station
P.O. Box 0500
185 Old Ferry Road
Brattleboro, VT 05302-0500

Mr. James H. Sniezek
5486 Nithsdale Drive
Salisbury, MD 21801

Ms. Stacey M. Lousteau
Treasury Department
Entergy Services, Inc.
639 Loyola Avenue
New Orleans, LA 70113

Mr. Raymond Shadis
New England Coalition
Post Office Box 98
Edgecomb, ME 04556

Mr. James P. Matteau
Executive Director
Windham Regional Commission
139 Main Street, Suite 505
Brattleboro, VT 05301

Mr. William K. Sherman
Vermont Department of Public Service
112 State Street
Drawer 20
Montpelier, VT 05620-2601

Mr. Michael D. Lyster
5931 Barclay Lane
Naples, FL 34110-7306

Ms. Charlene D. Faison
Manager, Licensing
440 Hamilton Avenue
White Plains, NY 10601

Mr. James Ross
Nuclear Energy Institute
1776 I Street, NW, Suite 400
Washington, DC 20006-3708

VERMONT YANKEE NUCLEAR POWER STATION
LICENSE RENEWAL APPLICATION
REQUESTS FOR ADDITIONAL INFORMATION (RAIs)

RAI 3.5.1-53-W-1

In Table 3.5.2-1 (Primary Containment, page 3.5-54) of the Vermont Yankee Nuclear Power Station (VYNPS) license renewal application (LRA), it states that the vent header support component, made of carbon steel material in an exposed fluid environment, has an aging effect of loss of material. The Generic Aging Lessons Learned (GALL) Report line item shown is III.B1.1-13 and the Table 1 reference is 3.5.1-53. The aging management program (AMP) shown for this line item is Inservice Inspection-IWF. GALL Report line Item III.B1.1-13 is for an indoor uncontrolled air or outdoor air environment. Please explain why GALL Report line Item III.B1.1-11 (treated water environment) and Table 1 Reference 3.5.1-49 are not associated with this aging management review (AMR) line item and the VYNPS Water Chemistry Control - BWR Program also shown with the Inservice Inspection-IWF AMP.

RAI 3.3.1-22-K-01

Please confirm that no auxiliary components have elastomer linings or stainless steel cladding. If there are such components, please provide a list of these componenets. Also, provide additional justification for the determination that pitting and crevice corrosion do not require aging management.

RAI 3.3.1-68-K-03

Beginning on Page 3.3-206 of the VYNPS LRA, loss of material from carbon steel components is managed using One-Time Inspection (OTI). Please justify the use of OTI for carbon steel exposed to raw water as opposed to a periodic inspection.

RAI 4.3-H-01

Table 4.3-2 on Page 4.3-4 of the VYNPS LRA indicates that the design transient of reactor startup/shutdown cycles has bounded all other transients for the reactor coolant system (RCS). Please describe all the transients bounded and demonstrate this bounding transient encompasses all other RCS transients (e.g. transient curves for pressure and temperature cycles). Please demonstrate that the cumulative usage factors (CUFs) are still within the limit of this revised bounding transient.

RAI 4.3-H-02

Does the revised feedwater nozzle analysis (Table 4.3-3) include the unanticipated leakage bypass transient which was described in NUREG-0619? If this actual transient was not considered in the CUF evaluation, please provide justification for excluding it.

RAI 4.3-H-03

In the basis document of the Fatigue Monitoring Program, 100EF/hour heatup/cooldown rate was identified for the normal transient conditions. The actual operating condition for heatup and cooldown rate is 100EF when averaged over any one hour period. Therefore, the actual operating condition may indicate much higher rate than 100EF/hour. For example, a 60EF temperature change for the 0.1 hour period represents a 600EF/hour rate. Physically, thermal stress is a function of rate of temperature difference. The higher the rate, the higher the stress.

Please provide a description to ensure that VYNPS's automatic cycle counting program will adequately define the transients and cycle numbers. Please provide a description to ensure the fatigue cumulative usage factor and thermal stresses are evaluated in accordance with the actual transients or encompassed by the actual transients.

RAI 3.1.1-17-P-01

According to USNRC Regulatory Guide 1.190, "Calculational and Dosimetry Methods for Determining Pressure Vessel Neutron Fluence", analytic uncertainty (Section 1.4.1) is to be considered in the calculation of fluence. As noted by the staff, in GE-NE-000-0007-2342-R1-NP (dated July 2003), "Entergy Northeast Vermont Yankee Neutron Flux Evaluation", flux variations of up to but less than 19% was considered. In response to staff AMR audit question #202, the applicant provided extrapolated data to determine if the top of the recirculation inlet nozzles (located at a "104R940" height of 202 inches) might experience an extended power uprate fluence of >1XE17.

Was a maximum flux variation of ~19%, considered in this "extrapolated data"? If not, what calculated fluence level would be experienced by the top of the recirculation inlet nozzles when the applicant considers a maximum flux variation of just less than 19%?