

July 31, 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 THE
PILGRIM NUCLEAR POWER STATION LICENSE RENEWAL APPLICATION
(TAC MC9669)

Dear Mr. Kansler:

By letter dated January 25, 2006, Entergy Nuclear Operations, Inc. submitted an application pursuant to 10 CFR Part 54, to renew the operating license for Pilgrim Nuclear Power Station for review by the U.S. Nuclear Regulatory Commission (NRC). 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. These requests for additional information address Sections B.1.3 Control Rod Drive Return Nozzle, B.1.26 Reactor Vessel Surveillance Program and time-limited aging analysis aspects for Reactor Vessel Fluence (Section 4.2.1).

These questions were discussed with a member of your staff, Bryan Ford, and a mutually agreeable date for this response is within 30 days from the date of this letter. If you have any questions, please contact me at 301-415-1478 or e-mail RXS2@nrc.gov.

Sincerely,

/RA/

Ram Subbaratnam, Project Manager
License Renewal Branch A
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-293

Enclosure:
Requests for Additional Information

cc w/encl: See next page

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OFFICE	PM:RLRA:DLR	LA:DLR	BC:REBB:DLR
NAME	RSubbaratnam	IKing	LLund
DATE	7/ 26 /06	7/ 21 /06	7/ 26 /06

OFFICIAL RECORD COPY

Letter to Michael Kansler from Ram Subbaratnam dated July 31, 2006

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PILGRIM NUCLEAR POWER STATION LICENSE RENEWAL APPLICATION
(TAC MC9669)

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
RidsNrrEemb
RidsNrrDeEeeb
RidsNrrDeEqva
RidsNrrDss
RidsNrrDnrl
RidsOgcMailCenter
RidsNrrAdes
DLR Staff

RSubbaratnam
SHoffman
SUttal
JShea
AWilliamson
MMitchell
Llambrose
GCheruvenki
GWilson
CAnderson, Region 1
WRaymond, Region 1
NSheehan, Region 1

Pilgrim Nuclear Power Station

cc:

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

Senior Resident Inspector
U. S. Nuclear Regulatory Commission
Pilgrim Nuclear Power Station
Post Office Box 867
Plymouth, MA 02360

Chairman, Board of Selectmen
11 Lincoln Street
Plymouth, MA 02360

Chairman
Nuclear Matters Committee
Town Hall
11 Lincoln Street
Plymouth, MA 02360

Chairman, Duxbury Board of Selectmen
Town Hall
878 Tremont Street
Duxbury, MA 02332

Office of the Commissioner
Massachusetts Department of
Environmental Protection
One Winter Street
Boston, MA 02108

Office of the Attorney General
One Ashburton Place
20th Floor
Boston, MA 02108

Director, Radiation Control Program
Commonwealth of Massachusetts
Executive Offices of Health and
Human Services
174 Portland Street
Boston, MA 02114

Secretary of Public Safety
Executive Office of Public Safety
One Ashburton Place
Boston, MA 02108

Director, Massachusetts Emergency
Management Agency
Attn: James Muckerheide
400 Worcester Road
Framingham, MA 01702-5399

Mr. William D. Meinert
Nuclear Engineer
Massachusetts Municipal Wholesale
Electric Company
P.O. Box 426
Ludlow, MA 01056-0426

Mr. Michael A. Balduzzi
Site Vice President
Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360-5508

Mr. Stephen J. Bethay
Director, Nuclear Safety Assurance
Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360-5508

Mr. Bryan S. Ford
Manager, Licensing
Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360-5508

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

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

Ms. Charlene D. Faison
Manager, Licensing
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

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

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

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

Mr. James Snizek
5486 Nithsdale Drive
Salisbury, MD 21801

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

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

Plymouth Public Library
Attn: Dinah O'Brien
132 South Street
Plymouth, MA 02360

Duxbury Free Library
ATTN: Ms. Elaine Winquist
77 Alden Street
Duxbury, MA 02332

Kingston Public Library
ATTN: Reference Librarian
6 Green Street
Kingston, MA 02364

Ms. Mary Lampert
Duxbury Nuclear Advisory, Chair
Pilgrim watch, Director
148 Washington Street
Duxbury 02332

REQUESTS FOR ADDITIONAL INFORMATION (RAIs)
PILGRIM NUCLEAR POWER STATION
LICENSE RENEWAL APPLICATION SECTIONS B.1.3, B.1.26 and 4.2.1

B.1.26 Reactor Vessel Surveillance Program

RAI-B.1.26-1

The applicant in the updated final safety analysis report (UFSAR) supplement A.2.1.28, "Reactor Vessel Surveillance Program," and in the aging management program (AMP) B.1.26, "Reactor Vessel Surveillance," states that it will implement the Boiling Water Reactor Vessel and Internals Project (BWRVIP) integrated surveillance program (ISP) at the Pilgrim Nuclear Power Station (PNPS) as specified in BWRVIP-116, "BWR Vessel Internals Project Integrated Surveillance Program Implementation for License Renewal." By letter dated March 1, 2006, the staff has issued the final safety evaluation (SE) for the BWRVIP-116 report and therefore, the staff requests that the applicant include the following statement in UFSAR supplement Section A.2.1.28 and in AMP B.1.26 of the license renewal application (LRA).

"The BWRVIP-116 report which was approved by the staff will be implemented at PNPS with the conditions documented in Sections 3 and 4 of the staff's final SE dated March 1, 2006, for the BWRVIP-116 report."

RAI-B.1.26-2

Title 10 of the Code Federal Regulations Part 50 (10 CFR Part 50), Appendix H requires that an ISP used as a basis for a licensee implemented reactor vessel surveillance program be reviewed and approved by the NRC staff. The ISP to be used by the applicant is a program that was developed by the BWRVIP. The applicant will apply the BWRVIP ISP as the method by which the PNPS unit will comply with the requirements of 10 CFR Part 50, Appendix H. The BWRVIP ISP identifies capsules that must be tested to monitor neutron radiation embrittlement for all licensees participating in the ISP and identifies capsules that need not to be tested (standby capsules). Table 3-3 of the BWRVIP-116 report indicates that the standby capsule from PNPS unit is not to be tested. This untested capsule was originally part of the applicant's plant-specific surveillance program and has received significant amounts of neutron radiation.

The staff requests that the applicant include the following statement in the UFSAR supplement Section A.2.1.28 of the LRA.

"If the PNPS standby capsule is removed from the reactor vessel without the intent to test it, the capsule will be stored in a manner which maintains it in a condition which would permit its future use, including during the period of extended operation, if necessary."

Enclosure

B.1.3-1 Control Rod Drive (CRD) Return Nozzle

RAI-B.1.3-1

Provide information regarding the type of inspection and the inspection frequency of the capped CRD return line nozzle weld overlay during the extended period of operation.

RAI-B.1.3-2

The applicant states that it will take the following exception to the inspection requirements for the CRD return line nozzle weld as mandated by the American Society of Mechanical Engineers (ASME) Code, Section XI.

PNPS proposes to examine $\frac{1}{2}$ " of the volume on either side of the widest part of the N10 nozzle-to-vessel weld in lieu of $\frac{1}{2}$ the vessel wall thickness as required by the ASME Code, Section XI, 1998 Edition, 2000 Addenda, Figure IAB-2500-7(b).

The staff requests that the applicant provide information regarding the state of stress that is present in the volume of the subject weld that will not be included in the future examinations. Clarify whether the highly stressed volume of the weld, where cracks can initiate, will be examined effectively with the proposed alternative. The staff believes that the applicant should obtain prior approval from the staff for implementing the proposed alternative examination under the provisions of 10 CFR 50.55a before entering into the extended period of operation. Provide information whether the proposed alternative examination of the CRD return line nozzle weld has previously been submitted to the staff for review and approval for the current ISI interval.

4.2.1 Reactor Vessel Fluence

RAI 4.2.1-1

Section 4.2.1 of the submittal indicates that PNPS used the radiation analysis modeling application code for the calculation of the 54 effective full-power year (EFPY) vessel fluence values. Section 4.2.2 states that recent calculations done per Regulatory Guide 1.190 confirm that the fluence for 54 EFPY is less than the fluence used to calculate the pressure and temperature limits in Reference 4.2-5, "Pilgrim Nuclear Power Station - Issuance of Amendment Re: Pressure-Temperature Limit Curves (TAC NO.MB0561)," letter dated April 13, 2001, Wang, A., to M. Bellamy.

Please provide information to substantiate this statement, preferably in the form of a contractor's report that documented these fluence calculations.