

March 15, 2007

MEMORANDUM TO: Louise A. Lund, Chief  
License Renewal Branch A  
Division of License Renewal  
Office of Nuclear Reactor Regulation

FROM: Matthew A. Mitchell, Chief */RA/*  
Vessels and Internals Integrity Branch  
Division of Component Integrity  
Office of Nuclear Reactor Regulation

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION ON TIME-LIMITED  
AGING ANALYSES FOR THE REACTOR VESSEL AND INTERNALS,  
PILGRIM NUCLEAR POWER STATION, LICENSE RENEWAL  
APPLICATION (TAC NO. MC9669)

The Vessels and Internals Integrity Branch is in the process of reviewing the information that was provided by Entergy (the applicant) pertaining to the Time-Limited Aging Analyses for the reactor vessel and internals of the Pilgrim Nuclear Power Station (PNPS). This information was provided by the applicant in its letter dated January 25, 2006, as part of the License Renewal Application for PNPS. The staff has identified that additional information is needed to complete the evaluation. The staff's request for additional information is enclosed.

Docket No.: 50-293

Enclosure:  
Request For Additional Information

CONTACT: Christopher R. Sydnor, DCI/CVIB  
(301) 415-6065

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REQUEST FOR ADDITIONAL INFORMATION  
TIME-LIMITED AGING ANALYSES FOR  
THE REACTOR VESSEL AND INTERNALS  
PILGRIM NUCLEAR POWER STATION  
LICENSE RENEWAL APPLICATION

1. Fluence was calculated for the Pilgrim reactor vessel (RV) for the extended 60-year licensed operating period (54 effective full power years (EFPY) of facility operation), using the RAMA fluence methodology. The RAMA fluence methodology was previously approved by the NRC staff, and the results are acceptable for licensing actions provided that: (1) the RAMA application follows the guidance in Regulatory Guide 1.190 and (2) RV fluence calculations have at least one credible plant-specific surveillance capsule for benchmarking.

The applicant provided 54 EFPY fluence values for the Pilgrim RV beltline materials in Section 4.2.1 of the License Renewal Application (LRA). These fluence values were used throughout Section 4.2 of the LRA for the RV neutron embrittlement time limited aging analyses (TLAAs). However, due to the lack of a credible plant-specific benchmark, the staff finds the 54 EFPY fluence values provided in LRA Section 4.2.1 unacceptable for use in the RV neutron embrittlement TLAAs. Therefore, the staff requests that the applicant revise Section 4.2.1 of the LRA to provide an acceptable neutron fluence evaluation or an alternative proposal for closing this TLAA topic in the LRA review.

2. Due to the lack of benchmarking data in support of the plant-specific RAMA fluence calculations, the staff cannot complete its review of the TLAAs in LRA Sections 4.2.2, 4.2.3, 4.2.4, 4.2.5, 4.2.6, and 4.7.1, as well as the aging management program (AMP) on the RV material surveillance program, using the current fluence values for the Pilgrim RV that were provided in LRA Section 4.2.1. Therefore, the staff requests that the applicant revise LRA Sections 4.2.2, 4.2.3, 4.2.4, 4.2.5, 4.2.6, 4.7.1, and the AMP on the RV material surveillance program to provide an acceptable evaluation of these topics or an alternative proposal for closing these topics in the LRA review.

ENCLOSURE