



October 31, 2008

Stephen J. Bethay
Director, Nuclear Assessment

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

SUBJECT: Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
Docket No. 50-293
License No. DPR-35

Validation of Pilgrim Fluence Data for P-T Curves

- REFERENCES:
1. Entergy Letter No. 2.07.078, License Renewal Application Commitment 47 Response, dated September 12, 2007
 2. Entergy Letter No. 2.07.006, Proposed Change to the Applicability of Pilgrim's Pressure-Temperature Curves as described in Technical Specification Figures 3.6.1, 3.6.2, and 3.6.3, Revision 1, dated, dated January 15, 2007

LETTER NUMBER: 2.08.059

Dear Sir or Madam:

In Reference 1, Entergy provided an action plan for the benchmarking validation of RAMA fluence calculations for the Pilgrim Nuclear Power Station (PNPS) reactor vessel to satisfy the commitment made in Reference 2 for revised Pressure-Temperature (P-T) curves beyond Operating Cycle 18.

Entergy stated in Reference 1, Action Item No. 4, that it will review data from a similar EPRI sponsored BWR/3 under the Integrated Surveillance Program (ISP) to determine if it can be used to document an acceptable Regulatory Guide 1.190 Calculated-to-Measured (C/M) bias for a BWR/3 using the RAMA code. Further, in the event Action Item 4 is not successful, Entergy stated that it is working in parallel (Action 5) to remove the existing capsule from the PNPS reactor vessel in the spring 2009 refueling outage for use in developing a new fluence calculation benchmark.

Since the last PNPS reactor vessel fluence evaluation, Entergy contractor TransWare has performed an activation/fluence evaluation for the Monticello nuclear power plant, also a BWR/3 class plant. As a part of the Monticello evaluation, RAMA-calculated activation predictions were compared to measurements for the 300° ISP capsule flux wires that were irradiated for 23 cycles (28.2 EFPY). Activation comparisons were performed for four copper, four iron, and four nickel flux wires that resided at various axial elevations in the capsule. The average C/M result for all copper activation measurements is 0.89, for all iron activation measurements is 1.08, and for all nickel activation measurements is 1.13. The resulting average C/M for all measurements in the Monticello capsule is $1.03 \pm 11\%$ (1σ). The comparison results are well within the Reg. Guide 1.190 guidelines and confirm that the RAMA fluence methodology provides an unbiased estimate of the fluence in the Monticello nuclear plant. In addition, the results obtained from the Monticello capsule comparisons using the RAMA Fluence Methodology are consistent with the observed comparisons from other BWRs (including BWR/2s, BWR/4s, and BWR/6s).

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Accordingly, Entergy has determined that the Monticello reactor vessel fluence calculation provides an acceptable BWR/3 RAMA benchmark.

Entergy will use Monticello as the benchmark for PNPS RAMA fluence calculations, rerun the model for PNPS, and use the results directly to prepare the revised P-T curves for Operating Cycle 18 and beyond. Consequently, we do not intend to remove the existing capsule from the PNPS reactor vessel during the spring 2009 refueling outage. This information was discussed with the NRC Staff on October 17, 2008.

Based upon the above acceptable approach, Entergy rescinds Action Item 5 specified in Reference 1 to remove the dosimetry capsule from PNPS reactor vessel during the spring 2009 refueling outage.

This letter contains no new commitments.

If you have any questions regarding the subject matter, please contact Joseph R. Lynch at (508)-830-8403.

Sincerely,



Stephen J. Bethay
Director, Nuclear Safety Assessment

cc: Mr. James S. Kim, Project Manager
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
One White Flint North O-8C2
11555 Rockville Pike
Rockville, MD 20852

Mr. Samuel J. Collins, Administrator
Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

NRC Resident Inspector
Pilgrim Nuclear Power Station