



Entergy Nuclear Operations, Inc.
Pilgrim Station
600 Rocky Hill Road
Plymouth, MA 02360

September 14, 2006

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

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

10 CFR 50.46(a)(3)(ii) Annual Report

REFERENCES: 1. Entergy letter to U.S. NRC, dated June 29, 2005,
10 CFR 50.46(a)(3)(ii) Annual Report
2. Global Nuclear Fuel, 10 CFR 50.46 Notification Letter 2006-01,
dated July 28, 2006
3. GE Nuclear Energy Report NEDC-31852P, "SAFER/GESTR-LOCA
Loss of Coolant Accident Analysis for Pilgrim Nuclear Power Station,"
Rev. 3, dated February 2005.

LETTER NUMBER: 2.06.084

Dear Sir or Madam:

This letter submits the annual report required by 10 CFR 50.46(a)(3)(ii).

Reference 1 submitted the previous annual report required by 10 CFR 50.46.

Reference 2 described a change in the evaluation model applicable to Pilgrim Station. In Reference 2, Global Nuclear Fuel (GNF) determined that for small break cases, a top-peaked axial power shape can result in higher calculated peak cladding temperature (PCT). An ECCS-LOCA analysis methodology change was implemented by GNF to perform the small break analysis considering both mid-peaked and top-peaked axial power shapes. Evaluations were performed on representative plants spanning all BWR plant types. BWR/2 plant analyses were not affected by the axial power shape assumption. For most BWR/3 - 6 plant, an increase in PCT for the most limiting small break 10 CFR 50 Appendix K case was required to address this axial power shape analysis assumption change. The effect on the licensing basis PCT, on a plant-by-plant basis was determined. For Pilgrim, the change in PCT for GE11 and GE14 fuel was zero degrees Fahrenheit.

Reference 3 documents the Pilgrim LOCA analysis for fuel cycle 16 that began with startup from the 2005 refueling outage. For fuel cycle 16, Reference 1 reported the Pilgrim licensing basis PCT for GE11 fuel and GE14 fuel at less than 2120°F and less than 2150°F, respectively. Therefore, the Pilgrim licensing basis PCT for GE11 fuel and GE14 fuel for fuel cycle 16 remains unchanged at less than 2120°F and less than 2150°F, respectively.

There are no other fuel types utilized for reactor operation during fuel cycle 16.

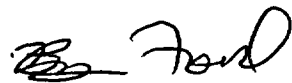
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There were no other reported changes or errors in the evaluation model for Pilgrim in the reporting period.

This letter contains no commitments.

Please feel free to contact me, (508) 830-8403, if you have any questions regarding this subject.

Sincerely,



Bryan Ford
Manager, Pilgrim Licensing

DWE/

cc: Mr. James Shea, Project Manager
Office of Nuclear Reactor Regulation
Mail Stop: 0-8B-1
U. S. Nuclear Regulatory Commission
1 White Flint North
11555 Rockville Pike
Rockville, MD 20852

Senior Resident Inspector
Pilgrim Nuclear Power Station

Mr. Samuel J. Collins
Regional Administrator, Region 1
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406