



Entergy Nuclear Generation Company  
Pilgrim Nuclear Power Station  
600 Rocky Hill Road  
Plymouth, MA 02360

J. F. Alexander  
Director  
Nuclear Assessment

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

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Subject: Pilgrim 10 CFR 50.46(a)(3)(ii) Report for 2000

- References:
- (1) General Electric Nuclear Energy Report to BECo, NEDC-31852P, Rev 1, "Pilgrim Nuclear Power Station SAFER/GESTR-LOCA Loss-of-Coolant-Accident Analysis", April, 1992.
  - (2) Letter from Entergy to the NRC, "Pilgrim 10 CFR 50.46(a)(3)(ii) Report for 1999", ENGCLtr. 2.00.012, January 27, 2000
  - (3) General Electric Nuclear Energy Report to Entergy, GE-NE-J1103808-08-02P, "Pilgrim Nuclear Power Station ECCS-LOCA Evaluation for Cycle 14", March 2001.
  - (4) General Electric Nuclear Energy Report to Entergy, GE-NE-J1103808-08-01P, "Pilgrim Nuclear Power Station ECCS-LOCA Evaluation for Cycle 14", March 2001.

Entergy (Pilgrim) submits this letter in accordance with 10 CFR 50.46(a)(3)(ii), which requires the reporting of changes or errors in emergency core cooling system (ECCS) analyses.

The ECCS or loss-of-coolant (LOCA) analyses for the Pilgrim Nuclear Power Station was reported in reference 1. These analyses were based upon an older 8X8 nuclear fuel design, the last of which will be discharged in the spring of 2001 during the next planned refueling outage, RFO 13. The effects of changes and errors upon limiting peak clad temperature (PCT), including an intermediary fuel design, were reported in reference 2. Updated ECCS-LOCA analyses were performed with NRC approved methods by General Electric Company and reported to Entergy in reference 3 in March 2001.

The most recent ECCS-LOCA analyses were specifically performed to evaluate the effect of loading a new 10X10 nuclear fuel design (GE14) for use during the next fuel cycle, Cycle 14. All changes and errors discovered since the reference 1 analyses were accommodated in the reference 3 analyses for the new fuel design, GE14. Therefore, the PCT results reported in reference 3 for GE14 fuel have no known errors and include the effects of all known changes. The licensing basis PCT for GE14 fuel is 1930 degrees F.

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The intermediary fuel design (GE11) was not reanalyzed in reference 3, and the cumulative effects of changes or errors estimated since the analyses reported in reference 1 still apply. However, the reference case for the determination of the licensing basis PCT was changed from rated-power and flow to the most limiting low-flow and rated-power condition in order to put both fuels used in the next cycle, GE11 and GE14, on the same comparable basis. The low flow-rated power (ELLLA) based PCT for GE11 was previously evaluated by Reference 1 to be 1975 degrees F. When a 10 degree F increase is included to account for the change from ELLLA to MELLLA based operation, the licensing basis PCT for GE11 fuel is restated as 1985 degrees F. The net effect of all errors or changes is estimated to increase PCT by <25 degrees F. This makes the new licensing basis PCT inclusive of all errors to be 2010 degrees F for GE11 fuel. All previous effects of reported errors and changes, and new minor changes included in reference 4, are accounted for in the analysis of GE14 fuel in reference 3.

This letter contains no commitments. While the cumulative sum of the absolutes of the effects upon PCT for GE11 fuel exceeds 50 degrees F, the expected PCT increase is < 25 degrees F from the restated licensing basis PCT. The sum of absolutes of all effects would be 110 degrees F.

In summary, inclusive of all currently known errors, the new licensing basis PCT for GE11 fuel is 2010 degrees F, and the licensing basis for the new GE14 fuel, to be loaded during RFO 13 in the spring of 2001 for use during Cycle 14, is 1930 degrees F. Therefore, both fuel designs being used in the Pilgrim reactor during Cycle 14 satisfy the 2200 degree F PCT limit for the postulated limiting loss-of-coolant event provided in 10CFR50.46.

Should you require further information on this issue, please contact P. M. Kahler at (508) 830-7939.



J. E. Alexander

cc: Mr. Alan B. Wang, Project Manager  
Project Directorate I-3  
Office of Nuclear Reactor Regulation  
Mail Stop: OWFN 14B2  
1 White Flint North  
11555 Rockville Pike  
Rockville, MD 20852

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

Senior Resident Inspector  
Pilgrim Nuclear Power Station