

July 6, 2004

Mr. Michael Kansler, President  
Entergy Nuclear Operations, Inc.  
440 Hamilton Avenue  
White Plains, NY 10601

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT - REQUEST FOR  
ADDITIONAL INFORMATION CONCERNING SAFETY LIMITS FOR MINIMUM  
CRITICAL POWER RATIO (TAC NO. MC3391)

Dear Mr. Kansler:

In a letter dated June 4, 2004, Entergy Nuclear Operations, Inc. (Entergy) submitted an application requesting a revision to the Technical Specifications (TSs) for the James A. FitzPatrick Nuclear Power Plant (JAFNNP). Specifically, the proposed TS revisions would change the safety limit values in TS 2.1.1.2 for the minimum critical power ratio (MCPR).

The Nuclear Regulatory Commission (NRC) staff is reviewing the information provided in the application and has determined that additional information is needed to complete its review. The specific questions are found in the enclosed supplemental RAI. During a telephone call on July 6, 2004, the Entergy staff indicated that a response to the RAI would be provided within 30 days.

If you should have any questions, please do not hesitate to call me.

Sincerely,

/RA/

Patrick D. Milano, Sr. Project Manager, Section 1  
Project Directorate 1  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-333

Enclosure: As stated

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION (RAI)  
REGARDING SAFETY LIMITS FOR MINIMUM CRITICAL POWER RATIO  
ENTERGY NUCLEAR OPERATIONS, INC.  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

By letter dated June 4, 2004, Entergy Nuclear Operations, Inc. (the licensee) requested a revision to the Technical Specifications (TSs) for the James A. FitzPatrick Nuclear Power Plant (JAFNPP). Specifically, the licensee proposed changes to the safety limit values in TS 2.1.1.2 for the minimum critical power ratio (MCPR). The Nuclear Regulatory Commission (NRC) staff has the following questions regarding the information provided:

1. Provide the values for power and non-power distribution uncertainties listed in Table 1 of Attachment 4 to the June 4 application. Justify that the proposed reduction of the MCPR value is still providing enough margin for Cycle 17 operation with respect to the results shown in Table 4.1 of General Electric Company (GE) Topical Report NEDC-32601P-A, "Methodology and Uncertainties for Safety Limit MCPR Evaluations." Explain why the reduction in the calculated MCPR value due to using the improved/revised methodology is greater for Cycle 17 than the reduction shown in Table 4.1 of NEDO-32601P-A.
2. Provide the relationship (in terms of the product of bundle-by-bundle MCPR distribution and the bundle pin-by-pin power/R-factor distribution) between the calculated MCPR and the power distribution uncertainty methodology and values that were used. Explain how these influenced the calculated MCPR and why a higher product number in Cycle 17 results with a lower calculated MCPR value than that in Cycle 16, as shown in Table 1 of Attachment 4. Also, explain the reason for obtaining a lower bundle-by-bundle MCPR distribution for Cycle 17 under revised Bases with respect to a higher number for Cycle 17 under the GE Thermal Analysis Basis (GETAB).
3. Describe the core monitoring methods to be used in Cycle 17 operation at JAFNPP and its interface with reduced power distribution uncertainties and other related input parameters as given in Table 2a of Attachment 4. Also, describe how the GEXL correlation R-factor uncertainty shown in Table 2b is generated. Discuss whether this uncertainty is a constant or is fuel-dependent, and provide a justification showing that the proposed value is conservative for this calculation.
4. Describe the issue related to outlet-peaked power shapes at any exposure in the cycle and its safety limit MCPR penalty associated with a top-peaked power shape in GE14 bundles for Cycle 17 operation.