



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

July 25, 2014

Vice President, Operations  
Entergy Nuclear Operations, Inc.  
James A. FitzPatrick Nuclear Power Plant  
P.O. Box 110  
Lycoming, NY 13093

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT - REQUEST FOR  
ADDITIONAL INFORMATION REGARDING PROPOSED SAFETY LIMIT  
MINIMUM CRITICAL POWER RATIO LICENSE AMENDMENT (TAC NO.  
MF4164)

Dear Sir or Madam:

By letter dated May 1, 2014, Entergy Nuclear Operations, Inc. submitted a license amendment application to revise the safety limit minimum critical power ratio for the James A. FitzPatrick Nuclear Power Plant.

The U.S. Nuclear Regulatory Commission staff is reviewing the submittal and has determined that additional information is needed to complete its review. The specific questions are found in the enclosed request for additional information (RAI). Based on our discussions we understand that a response to the RAI will be provided within 30 days of the date of this letter.

Please contact me at (301) 415-1364 if you have any questions on this issue.

Sincerely,

A handwritten signature in black ink, reading "Douglas V. Pickett".

Douglas V. Pickett, Senior Project Manager  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-333

Enclosure:  
Request for Additional Information

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

ENTERGY NUCLEAR OPERATIONS, INC.

JAMES A. FITZPATRICK NUCLEAR POWER PLANT LICENSE AMENDMENT REQUEST

TO REVISE TECHNICAL SPECIFICATIONS – SAFETY LIMIT

MINIMUM CRITICAL POWER RATIO (TAC # MF4164)

DOCKET NO. 50-333

By application dated May 1, 2014, Entergy Nuclear Operation, Inc., the licensee for James A. FitzPatrick Plant (JAFP) submitted an amendment requesting changes to Technical Specifications Section 2.1.1.2, "Reactor Core SLs." The amendment proposed revising the cycle-specific safety limit minimum critical power ratio (SLMCPR) for the upcoming Cycle 22.

Based on its review, the U.S. Nuclear Regulatory Commission staff requests the following additional information to complete its safety evaluation of the application.

**SRXB-RAI-1**

Figure 5, Attachment 4 of the license amendment request (LAR) indicates identical behavior relationship between the Minimum Critical Power Ratio (MCPR) Importance Parameter (MIP) and critical power ratio margin for GNF2 fuel and GE14 fuel. Explain the differences in the design and geometrical considerations between GNF2 and GE14 and explain the reason for this identical MCPR related behavior.

**SRXB-RAI-2**

- 2-1) – Explain the reload methodology and the loading schemes used for Cycles 21 and 22
- 2-2) – For the initial core loadings of Cycles 21 and 22, specify the fuel type, number of fresh, once burned, twice and thrice burned fuel.
- 2-3) – For Cycles 21 and 22 provide calculated beginning of cycle core excess hot reactivity and the core average burnup at end of cycle.

**SRXB-RAI-3**

For Cycles 21 and 22, provide the expected maximum cell-averaged bow, the methodology used and the analysis that determined its value.

**SRXB-RAI-4**

Table 3 of Attachment 4 of the LAR indicates that JAFP is affected by the off-rated flow condition as explained in the GNF SLMCPR Part 21 report dated August 24, 2004 (MFN 04-081).

Enclosure

Explain the reason for the change in the “estimated SLMCPR value” for Cycle 22 compared to the previous cycle where the MIPRIP correlation (combines the MIP and R-Factor Importance Parameter (RIP) values) and the Monte Carlo were used for the analysis (see Table 3 of Attachment 4.)

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/RA/

Douglas V. Pickett, Senior Project Manager  
Plant Licensing Branch I-1  
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NAME	DPickett	(SFiguroa for) KGoldstein	CJackson by memo dated	BBeasley
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