

**From:** Vaidya, Bhalchandra  
**Sent:** Thursday, July 01, 2010 2:13 PM  
**To:** Dorman, Eugene; 'Pechacek, Joseph'  
**Cc:** Ulses, Anthony; Huang, Tai; Pickett, Douglas; Salgado, Nancy  
**Subject:** FitzPatrick, ME3786, Revised RAIs re: amendment request for MCPR

With reference to the discussion in the tele-conference today, the revised Requests for additional information are provided below: (Revised text is shown in **BOLD**)

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REQUEST FOR ADDITIONAL INFORMATION  
RELATING TO PROPOSED AMENDMENT TO LICENSE NO. DPR-59  
ENTERGY NUCLEAR OPERATIONS  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

The Nuclear Regulatory Commission (NRC) staff has reviewed the April 21, 2010, Entergy submittal regarding changes to the James A. FitzPatrick (JAF) Nuclear Power Plant Cycle 20 Safety Limit Minimum Critical Power Ratios (SLMCPRs) and has the following questions and comments concerning Attachment 1 of the submittal:

1. Please provide the number of fuel assemblies for each fuel type in Figures 1 and 2 for Cycle 20 and Cycle 19. In addition, please provide the details to obtain a final core loading pattern as shown in Figure 1 including procedures, guidelines, criteria, and approved methodologies used for this analysis.
2. It appears that the current cycle for JAF is cycle 20. Please clarify that the proposed MCPR values for Cycle 20 are mainly for mid-cycle operation and not intended for the coming cycle 21 operation.
3. GNF2 fuel deviates from traditional 10x10 design through the introduction of a new part length rod configuration, the use of higher linear power, and the use of mixing vanes. The staff considers this a new fuel design with regards to the four restrictions identified in the Safety Evaluation of GE Licensing Topical Reports NEDC-32601P, NEDC-32694 and Amendment 25 to NEDE-24011-P-A. Given that JAF Cycle 20 uses a core loading pattern which includes GNF2 fuel, please provide the following: (1) an evaluation of the four restrictions in NEDC-32601P, NEDC-32694 and Amendment 25 to NEDE-24011-P-A, **(2) a description that explains under what conditions the methodologies listed in Section 1.0 of Attachment 4 are applied to the JAF Cycle 20 application**, and (3) the reason why GNF2 has much higher critical Power uncertainty than that of GE14 as shown in Table 6 of Attachment 4.
4. Please provide: (1) an approximation of the correlation for MCPR Importance Parameter (MIP) and R-Factor Importance Parameter (RIP) including applicable fuel related coefficients and constants leading to the results of two-loop operation (TLO) SLMCPR estimate using the MIPRIP Correlation shown in Table 3, and (2) justification that the approximation is still applicable to GNF2 fuel considering there are no GNF2 data points in Figure 5.

5. In Section 2.1 "Major Contributors to SLMCPR Changes," it states that "Table 3 presents estimated impacts on the TLO SLMCPR due to methodology deviations, penalties, and/or uncertainties deviations from approved values." Please provide: (1) calculation details and justification that the results listed in Table 3 are conservative related to "methodology deviations, penalties, and/or uncertainties deviations from approved values," and (2) justification that all affected factors including any fuel related Part 21 issues are included in Table 3.

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Please note that in the telephone conference today, the licensee has committed to submit the responses to these requests by July 15, 2010.

Please contact me, if you have any questions.

Thanks,

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Mail Envelope Properties ()

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