

March 15, 2001

Mr. William A. Eaton
Vice President, Operations GGNS
Entergy Operations, Inc.
P. O. Box 756
Port Gibson, MS 39150

SUBJECT: GRAND GULF NUCLEAR STATION, UNIT 1 - REQUEST FOR
ADDITIONAL INFORMATION RE: AMENDMENT REQUEST FOR CHANGE
TO THE MINIMUM CRITICAL POWER RATIO SAFETY LIMIT FOR CYCLE
12 OPERATION (TAC NO. MB0514)

Dear Mr. Eaton:

The staff is reviewing your license amendment request dated November 10, 2000 (GNRO-2000/00084) for changes to the Technical Specifications associated with Reactor Core Safety Limits and the Core Operating Limits Report to support Grand Gulf Nuclear Station Cycle 12 operation. Based on this review, the enclosed request for additional information (RAI) has been developed.

It is requested that you provide a response to the enclosed RAI by March 21, 2001. This response date was discussed with Mr. Jerry Roberts of your staff on March 7, 2001, who indicated that Entergy Operations, Inc. will be able to meet this date. The staff appreciates the efforts expended with respect to this matter.

If you have any questions regarding this issue, please call me at 301-415-2623.

Sincerely,

/RA/

S. Patrick Sekerak, Project Manager, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosure: RAI

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION
RELATED TO GRAND GULF NUCLEAR STATION, UNIT 1
AMENDMENT REQUEST FOR CHANGE TO
MINIMUM CRITICAL POWER RATIO SAFETY LIMIT (SLMCPR)
FOR CYCLE 12 OPERATION (TAC NO. MB0514)
(REF. GNRO-2000/00084, DATED NOVEMBER 10, 2000)

In order to complete our review and evaluation of the subject license amendment request, the Nuclear Regulatory Commission staff requests the following additional information:

1. Provide the fuel types and numbers of assemblies used in Grand Gulf Nuclear Station, Unit 1 (GGNS), Cycle 12 operation and identify if they are fresh or irradiated fuel (once or twice burned, etc.). Also, provide the fuel loading pattern for Cycle 12 operation, identify its difference from Cycle 11, and the impact on the SLMCPR calculation.
2. Provide a description of the test performed for the thermal-hydraulic characteristics of the GE11 fuel design evaluated in Siemens Power Corporation (Siemens) hydraulic test facility, and describe the details of the proper inputs determined for the Cycle 12 SLMCPR calculation based on these test results.
3. GE11 fuel is dominant in GGNS Cycle 11 core, in which there are only 36 thrice burned Siemens 9x9-5 fuel assemblies which may not contribute to the difference in calculated SLMCPR value, and Cycle 12 operation is a mixed core of 204 fresh ATRIUM-10 fuel bundles and once and twice burned GE11 fuel bundles. It appears that the two recirculation loop operation for Cycle 12 has less SLMCPR value than that in Cycle 11 operation by 0.01. Please describe the calculation methods in detail, and justify that the decrease of the SLMCPR value for two recirculation loop operation and no change of SLMCPR for single loop operation still provide enough margin for Cycle 12 operation. Please also provide a description of the methodology which resulted in the data cited in references A.1, A.4, and A.7 of Attachment 4 to GNRO-2000/00084.
4. Technical Specifications (TS) for the Core Operating Limits Report (COLR) include the TSs to be removed to the COLR and the list of approved methodologies to support those TSs to be removed to the COLR. Those methods should provide the calculation of the cycle-specific core operating limits specified in the COLR TS and in Generic Letter 88-16. Provide the justification that those proposed 26 approved topical reports satisfy the COLR TS criteria. Also, for TS 5.6.5 COLR reference a.5, provide a more definitive reference location for the actual cycle-specific core operating limit parameters which are contained within the TS specified.
5. A statement made in CNRO-2000-00024, in the section titled Application Procedures, reads "...As this is expected to be a one-time analysis with no ongoing applications of the methodology, a separate calculation procedure was not developed...." Please clarify its real intention for this cycle-specific application.

Enclosure

Grand Gulf Nuclear Station

cc:

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