June 30, 2000

Mr. T. A. Coleman, Vice President
Government Relations
Framatome Cogema Fuels
3315 Old Forest Road
P. O. Box 10935
Lynchburg, Virginia 24506-0935

SUBJECT: DISPOSITION OF DESIGN CHANGES TO MARK-B11 FUEL ASSEMBLY (TAC NO. MA9147)

References:

1. Letter from T. A. Coleman, FCF, to NRC dated June 2, 2000
2. BAW-10229P-A, "Mark-B11 Fuel Assembly Design Topical Report"
3. BAW-10186P-A, Rev. 1, "Extended Burnup Evaluation," April 2000
4. BAW-10227P-A, "Evaluation of Advanced Cladding and Structural Material (M5TM) in PWR Reactor Fuel," February 2000.
5. BAW-10179P-A, Rev. 3, "Safety Criteria and Methodology for Acceptable Cycle Reload Analyses," October 1999.

Dear Mr. Coleman:

By letter dated June 2, 2000 (Reference 1), Framatome Cogema Fuels (FCF) informed the Nuclear Regulatory Commission (NRC) of proposed design changes to the Mark-B11 fuel assembly, and stated that the design changes would be evaluated using the NRC-approved methodologies, so that NRC review was not required. The changes include (1) an enhanced lead-in feature on the upper end fitting corner post of all Mark-B fuel designs, (2) a modification to the leaf spring design to optimize the reduction in holddown force and to eliminate the additional mechanical setting step during manufacture, and (3) an increase in the fuel rod plenum space. FCF stated that other performance enhancing modifications were also being considered.

The Mark-B11 Fuel Assembly Design Topical Report, BAW-10229P (Reference 2), was submitted to the NRC in September 1997, and was approved by the NRC on October 26, 1999. FCF stated that the proposed design changes have been or will be analyzed with the NRC approved methodology described in References 2, 3, 4 and 5.

FCF utilizes the reload analysis methodology described in Topical Report BAW-10179P-A in performing reload safety evaluations. During the review of BAW-10179P, FCF stated and NRC approved the criteria for defining when a design change should be submitted to the NRC for review and approval. The following are the five criteria for changes that need NRC review:

1. The change results in an unreviewed safety question.

2. A change to the plant technical specifications is required.

3. The applicability of NRC-approved design/analysis or evaluation methods is affected.

4. A material not previously qualified for in-reactor operation in a similar application is introduced.

5. Burnup limits are extended beyond those previously approved.

Furthermore, FCF gave examples of changes for which NRC review would not be required. One of these was "a change in fuel rod clad length or wall thickness." This provides precedent for the type of changes that do not require NRC approval. FCF is using the process outlined in BAW-10179P as the basis for making the above mentioned design changes to the Mark-B11 fuel assembly which was described in BAW-10229P-A.

The staff has reviewed the material provided and agrees that since FCF is using the approved methodology as described in Topical Report BAW-10179P-A to determine that the proposed design changes do not need NRC review and approval, the process as described by FCF is acceptable.

If you have any questions about this letter, please contact me at 301-415-1321 or Margaret Chatterton at 301-415-2889.

Sincerely,

/***RA/***

Stewart Bailey, Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Project No. 693

cc: Mr. F. McPhatter, Manager
Framatome Cogema Fuels
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Stewart Bailey, Project Manager, Section 2
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