



Proj 693

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Document Control Desk
ATTN: Chief, Planning, Program and Management Support Branch
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

NRC Review of BAW-10186(P) Revision 1, Supplement 1, Mark-BW Extended Burnup

Ref.: 1. Letter, J. F. Mallay (FRA-ANP) to Document Control Desk (NRC), "Request for Review of BAW-10186P Revision 1, Supplement 1, Mark-BW Extended Burnup," NRC:01:048, November 19, 2001.

Ref.: 2 BAW-10227(P)(A) Revision 0, Evaluation of Advanced Cladding and Structural Material (M5) in PWR Reactor Fuel, February 2000.

Framatome ANP requested that the NRC review and approve the topical report BAW-10186(P) Revision 1, Supplement 1, Mark-BW Extended Burnup, in Reference 1. The topical report states in the introduction:

This document provides the justification for the use of the Mark-BW design with M5TM cladding to 62,000 MWd/mtU. The approval of this Supplement will supercede the SER restrictions on burnup in Reference 1 (BAW-10186 Revision 1) and Reference 2 (BAW-10227 Revision 0) for the Mark-BW designs.

The extension to 62,000 MWd/mtU is requested for M5TM clad in structures made from either Zr-4 or M5TM. Fuel assembly structure materials may be Zr-4 or M5TM; i.e., guide tubes, instrument tube, spacer grids and other applicable components.

Framatome ANP requests that the NRC authorize the issuance of both an approved version of BAW-10186(P) Revision 1, Supplement 1 and an approved version of BAW-10227(P) in the safety evaluation for BAW-10186(P) Revision 1, Supplement 1. Framatome ANP plans to issue BAW-10227(P)(A) Revision 1, which would consist of BAW-10227(P)(A) Revision 0 plus the NRC safety evaluation for BAW-10186(P) Revision 1, Supplement 1. The purpose of the revision of BAW-10227(P)(A) Revision 0 is to have an A version of the Reference 2 document that clearly states that the burnup limit for fuel assemblies containing M5 cladding or structural material is 62,000 MWd/mtU.

For clarity, Framatome ANP specifically requests that the NRC include a statement similar to the following in the safety evaluation for BAW-10186(P) Revision 1, Supplement 1.

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The NRC staff concludes that the advanced cladding and structural material M5, properties and mechanical design methodology, as defined in BAW-10186(P) Revision 1 Supplement 1 and BAW-10227(P)(A) Revision 0, are acceptable for fuel reload licensing applications up to rod average burnup levels of 62, 000 MWd/mtU for PWR fuel designs. This burnup limit replaces the burnup limit of 60,000 MWd/mtU in BAW-10186 (P)(A) Revision 1 and BAW-10227(P)(A) Revision 0 for the Mark-BW fuel design.

Very truly yours,



James F. Mallay, Director
Regulatory Affairs

cc: D.G. Holland
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