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Docket Number 50-346

License Number NPF-3

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United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555

Subject: Nuclear Regulatory Commission Review of Current Babcock and  
Wilcox Fuel Company Topical Report Submittals

Gentlemen:

In September 1991, the Babcock and Wilcox Fuel Company (BWFC) submitted and requested Nuclear Regulatory Commission (NRC) review and approval of three topical reports: NEMO, FRGPC, and CROV8. The NRC's approval of these topical reports is very important to Toledo Edison's (TE) immediate and long term fuel management objectives for the Davis-Besse Nuclear Power Station (DBNPS), Unit Number 1. A description of these three topical reports and their specific application to the DBNPS is attached. The benefits associated with the implementation of these improved methodologies are significant to the DBNPS.

Any delay in the NRC's review and approval of these topical reports would be of serious concern to TE as core design for Cycle 9 will soon commence at the BWFC using NEMO. Toledo Edison understands, from conversations with the BWFC, that the NRC review of NEMO is scheduled for completion in May 1992. This date matches fairly well with the needs of TE. Toledo Edison also understands that the NRC intends to begin the review of FRGPC and CROV8 after October 1, 1992. This also meets TE's needs assuming that these reviews are completed by March 31, 1993. Due to their importance to TE's fuel management objectives and upcoming core design decisions, TE requests that the NRC confirm by March 31, 1992 the NRC's review schedule for these topical reports.

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If you have any questions, please contact Mr. R. W. Schrauder,  
Manager - Nuclear Licensing, at (419) 249-2366.

Very truly yours,



KBR/dlm

Attachment

cc: A. B. Davis, Regional Administrator, NRC Region III  
J. B. Hopkins, NRC/NRR DB-1 Senior Project Manager  
W. Levis, NRC Region III, DB-1 Senior Resident Inspector  
Utility Radiological Safety Board

Babcock and Wilcox Fuel Company  
Computer Codes under NRC Review

NEMO is BWFC's new advanced nodal code. BWFC expects to use NEMO for the Davis-Besse Nuclear Power Station (DBNPS) Cycle 9 reload safety analysis. Therefore, the core design will be done on this basis. Since NEMO provides different results than the old PDQ methodology, a design developed for Cycle 9 based on the NEMO code would not be acceptable when analyzed with PDQ. Overall, NEMO allows a significantly better core design than PDQ, such that if NEMO were not to be topically approved by the NRC in time for the Cycle 9 design, it would be very difficult to meet the design requirements for the Cycle 9 reload as it is currently being planned.

FRGPC refers to a fuel burnup limit based on internal fuel pin pressure. This limit is one of the greatest constraints on reload design. The Cycle 9 design will require the existing pin pressure burnup limit, which is based on TACO2 and limited by system pressure, to be extended using TACO3 and FRGPC if the desired cycle length is to be licensed.

CROV8 is BWFC's improved fuel rod cladding creep collapse predictor code. This code will allow internal fuel pin prepressure to be reduced, thereby allowing a higher burnup limit. The implementation of both CROV8 and FRGPC is required to achieve the DBNPS's minimum desired burnups in the near term. If CROV8 is not topically approved by the NRC prior to the fabrication of the Cycle 9 reload fuel, currently scheduled to begin in September 1992, then a higher prepressure, with an associated loss of burnup capability for that reload batch of fuel, will occur. While a lower burnup limit for this batch of fuel will probably be acceptable for the Cycle 9 reload, the lower prepressure is certainly required for the Cycle 10 reload and beyond.