

March 15, 2000

MEMORANDUM TO: Stuart A. Richards, Director  
Project Directorate IV & Decommissioning  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

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

SUBJECT: SUMMARY OF MARCH 9, 2000, CONFERENCE CALL WITH THE  
BABCOCK & WILCOX OWNERS GROUP ON APPLICATION OF LEAK  
BEFORE BREAK TO DESIGN OF STEAM GENERATOR REPAIR  
METHODS (TAC NO. MA8410)

On March 9, 2000, members of the NRR's Division of Licensing Project Management and Division of Engineering discussed the application of leak before break (LBB) methodologies to the design of steam generator (S/G) repair methods with the Babcock and Wilcox Owners Group (B&WOG). The B&WOG participants were Duke Energy, Florida Power Corporation, Amergen, Entergy, FirstEnergy, and Framatome Technologies, Inc. (FTI).

The call was prompted by a recent discovery by FirstEnergy that, when designing the tube re-rolling repair methods, FTI had not considered the loads from a large break loss-of-coolant accident (LBLOCA). FTI believed that LBB could be used to justify removing LBLOCA from the design bases. FirstEnergy informed the NRC of this issue when they could not find explicit NRC approval for this application of LBB. The re-roll repairs have been used at all of the B&W plants except Three Mile Island (TMI).

During the call, FTI explained their reasoning for applying LBB. They also stated that the issue had a low safety significance due to the low probability of a LBLOCA. They requested that the issue be dealt with on an owners group basis, as opposed to individual licensees needing to take actions.

The staff told the B&WOG the following:

1. The staff has not approved the use of LBB for this application. Therefore, LBLOCAs need to be considered in the design basis, and the previously-approved repair methods are invalid (they are based on incomplete information).
2. Licensees who have previously rolled tubes (all of the B&W plants, except TMI) need to justify the operability of their S/Gs (e.g., use Generic Letter 91-18 to justify continued operation).
3. It is inappropriate to use previously-approved license amendments to roll-repair more S/G tubes until this issue is resolved.

The staff asked to be notified if licensees take exception to this position.

The staff also stated that the operability determinations should address more than just the probability of a LBLOCA. They should also discuss the effect of tubes slipping (which may occur due to thermal loads) on the tube leakage and on recovery from the transient.

Finally, the staff asked the B&WOG about other design bases that may be relying on LBB without specific NRC approval, since FTI has apparently been omitting LBLOCAs in their design work since 1991. The B&WOG stated that they would look into this and inform the staff of their findings.

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