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April 3, 1984

Docket Nos. 50-348
50-364

Director, Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Mr. S. A. Varga

Joseph M. Farley Nuclear Plant - Units 1 and 2
NUREG-0737, Item II.K.3.5 and Generic Letter 83-10d

Gentlemen:

By letters of April 22 and December 22, 1983, Alabama Power Company presented the plan for demonstrating compliance with the criteria for resolution of TMI Action Plan Requirement Item II.K.3.5. These criteria were established in NRC Generic Letter 83-10d, dated February 8, 1983, to all Licensees with Westinghouse designed Nuclear Steam Supply Systems. The submittals which fulfill the established requirements have been transmitted to the NRC by Westinghouse Owners Group (WOG) letters OG-110, dated December 1, 1983 and OG-117, dated March 12, 1984.

Section I of the attachment to Generic Letter 83-10d discusses "Pump Operation Criteria Which Can Result in RCP Trip During Transients and Accidents". Subsection 1 of Section I presents guidelines for establishing setpoints for RCP Trip. The Westinghouse Owners Group response to this section of Generic Letter 83-10d has been incorporated into Revision 1 to the WOG Emergency Response Guidelines, which has been issued to member utilities. These guidelines will be incorporated into the Farley Nuclear Plant Emergency Response Procedures in accordance with Alabama Power Company's schedule to implement the provisions of Supplement 1 to NUREG-0737.

The RCP trip criteria being adopted in the Farley Nuclear Plant plant-specific procedures not only assures RCP trip for all losses of primary coolant for which trip is considered necessary but also permits RCP operation to continue during most non-LOCA accidents, including steam generator tube rupture events up to the design basis double-ended tube rupture. The generic applicability of the RCP trip criteria selected has been documented by the WOG report entitled, "Evaluation of Alternate RCP Trip Criteria", which has been submitted to the NRC for review in letter OG-110.

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The WOG has also submitted to the NRC, via letter OG-117, the report entitled "Justification of Manual RCP Trip for Small Break LOCA Events". As stated above, these submittals completed the WOG documentation comprising a generic reply to Generic Letter 83-10d.

Subsection 2 of Section I of the attachment to Generic Letter 83-10d provides guidance for justification of manual RCP trip. Subsection 2a requires that compliance with 10CFR50.46 be demonstrated in an Appendix K small break LOCA analysis given that the RCPs are tripped two minutes after the onset of reactor conditions corresponding to the RCP trip setpoint. The WOG has generically verified in the OG-117 submittal that predicted LOCA transients, assuming the two minute delayed RCP trip, are nearly identical to those presented in safety analysis reports utilizing the WFLASH evaluation model. Thus, the Final Safety Analysis Report for the Farley Nuclear Plant, which utilizes the WFLASH evaluation model, demonstrates Alabama Power Company's compliance with the Subsection 2a guidelines.

The WOG has also performed most probable, best estimate WFLASH analyses to demonstrate compliance with the guidelines presented in Subsection 2b of Section I of the attachment to Generic Letter 83-10d. These analyses identify that the minimum time available for operator action for the complete range of LOCA break sizes exceeds the value contained in ANSI Standard N660; they show that RCPs may be tripped at any time during a LOCA event without resulting in excessive clad temperatures. The information presented in the generic report affirms the applicability of this best estimate analyses to the Farley Nuclear Plant; therefore, in combination with the Subsection 2a justification cited above, the best estimate analyses justify that manual RCP trip is acceptable for the Farley Nuclear Plant when RCP trip setpoints consistent with Revision 1 to the Emergency Response Guidelines are in use. Furthermore, the generic report demonstrates that no additional contingency emergency response procedures are required to address the scenarios which may follow a missed RCP trip setpoint.

As referenced in Alabama Power Company's April 22, 1983 letter to the NRC, wide range primary system pressure is currently being utilized for the RCP trip setpoint. The acceptance criteria of this instrument is also discussed in the April 22, 1983 letter. Alabama Power Company has subsequently reviewed the WOG criteria relating to RCP trip and has chosen subcooling as the variable for RCP trip. The acceptance criteria, which will include instrumentation quality level, design features and degree of redundancy for this variable, have been addressed in Alabama Power Company's R.G. 1.97 Compliance Report for Unit 2, dated March 30, 1984 and will be addressed by a similar report for Unit 1 in June 1984. The Farley Nuclear Plant training program instructs license candidates and licensed personnel to trip the RCPs in the event of a small break LOCA in accordance with the Farley Nuclear Plant Emergency Response Procedures. This program will include use of subcooling as the criteria to trip RCPs upon incorporation of this criteria into existing Emergency Response Procedures.

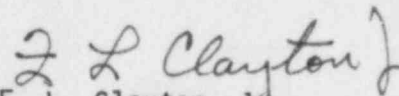
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In summary, the generic information presented by the WOG in the reports entitled "Evaluation of Alternate RCP Trip Criteria" and "Justification of Manual RCP Trip for Small Break LOCA Events" provides the response to Generic Letter 83-10d for the Farley Nuclear Plant. The implementation of Revision 1 to the WOG Emergency Response Guidelines in the plant-specific emergency response procedures with an appropriate RCP trip setpoint specified resolves all issues associated with automatic tripping of the RCPs.

If you have any questions, please advise.

Yours truly,


F. L. Clayton, Jr.

FLCJr/JAR:grs-D32

cc: Mr. R. A. Thomas
Mr. J. P. O'Reilly
Mr. E. A. Reeves
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