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July 15, 1983



Docket No. 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 - Unit 2
Turbine Valve Technical Specification Change Request

Gentlemen:

Alabama Power Company letter dated July 13, 1983 requested an expedited review of the May 23, 1983 submittal for a one-time technical specification change to delete the turbine valve testing at Unit 2 for the remainder of the fuel cycle. On July 14, 1983, the NRC Staff requested additional information to support the expedited review process. The requested information is contained herein.

The NRC Staff requested additional information regarding the consequences of excessive seal leakage from the #1 reactor coolant pump seal. The current problem of increase in seal leakoff flow from the #1 seal affects unit operability, not unit safety, and is well understood by Alabama Power Company and Westinghouse.

The #1 reactor coolant pump seal is subjected to temperature and/or pressure fluctuations from the seal injection and return system during normal operational transients (e.g., turbine valve testing). These fluctuations result in variations in seal leakoff flow from the #1 seal. Normally these variations in seal leakoff flow are minimal (i.e., less than 1 gpm) but, due to seal component wear during the design seal life, these variations can become significant (i.e., greater than 1 gpm). The probability of experiencing these excessive leakoff variations has increased for the #1 seal on reactor coolant pump 2A due to seal component wear.

When the #1 seal leakoff flow exceeds the maximum leakoff flow of 6 gpm, the #1 seal leakoff valve is closed to stop the excessive flow. No reactor coolant system water is lost since the leakoff flow is being returned by the charging system. After the #1 seal leakoff valve is closed, the #2 seal becomes the pressure boundary. This allows an opportunity to try to return the #1 seal to operation or to bring the unit to a controlled shutdown.

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Attempts to return the #1 seal to operation involves reopening the #1 seal leakoff valve to reestablish a pressure drop across the seal. If the seal leakoff flow returns to normal, the #1 seal remains in service and plant operation can continue. If #1 seal leakoff flow cannot be restored to within design limits, the #1 seal leakoff valve is reclosed and the reactor coolant pump is removed from service within 30 minutes. This involves a plant shutdown for seal repair. A catastrophic seal failure (as opposed to a small leakage increase with total flow in excess of 6 gpm) would be indicated to the plant operator by an increase in lower bearing temperature, an increase in seal leakoff temperature, a significant increase in charging pump flow and a significant increase in the #2 seal leakoff flow.

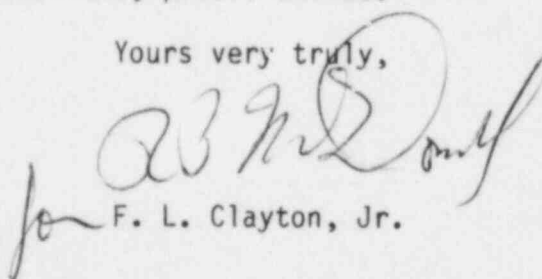
The consequence of excessive leakage from the #1 seal is plant shutdown for seal repair. The probability of a small break LOCA is not significantly affected by the current condition of excessive leakoff from the #1 seal. Again, this current condition is well understood by Alabama Power Company and Westinghouse such that appropriate and prompt operator action is assured.

As stated in the July 13, 1983 letter, the performance of the turbine valve testing on a weekly frequency would unnecessarily jeopardize the #1 seal on reactor coolant pump 2A during the remainder of the fuel cycle. The deletion of the turbine valve testing technical specification surveillance requirement would reduce the probability of causing excessive seal leakage and a resultant forced shutdown to repair the seals. However, Alabama Power Company commits to perform the turbine valve testing required by Technical Specification 4.3.4.2 once during August 1983. Consequently, Alabama Power Company requests that the NRC expedite review of the May 27, 1983 request for a one-time technical specification change to forego weekly turbine valve testing on Unit 2 for the remainder of the fuel cycle.

In addition, Alabama Power Company has identified a clerical error in the May 27, 1983 submittal. Surveillance Requirement 4.3.4.2.c should also be revised to be performed once during August 1983 since it is performed in conjunction with Surveillance Requirements 4.3.4.2.a and 4.3.4.2.b. A revised proposed change to the Unit 2 Technical Specification pages 3/4 3-72 and 3/4 3-73 is attached to correct this error.

If there are any questions, please advise.

Yours very truly,



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Attachment

cc: Mr. R. A. Thomas
Mr. G. F. Trowbridge
Mr. J. P. O'Reilly
Mr. E. A. Reeves
Mr. W. H. Bradford
Dr. I. L. Myers