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F. L. CLAYTON, JR.  
Senior Vice President



August 27, 1981

Docket No. 50-364

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

Attention: Mr. B. J. Youngblood



RE: Joseph M. Farley Nuclear Plant - Unit 2  
Amendment to Operating License No. NPF-8  
Appendix A Technical Specifications

RE: Alabama Power Company Letters to NRC Dated  
August 24, 1981 and August 25, 1981

Gentlemen:

In the referenced letters, Alabama Power Company requested temporary relief from the Containment Cooling System Technical Specifications (Section 3.6.2.3). After further review of the Containment Cooling System design, it has been determined that a permanent Technical Specification change is warranted.

Analyses have been performed to assess the effects on containment pressure/temperature response with one (1) containment air cooler and one (1) containment spray pump operable during the design basis events of either an instantaneous large LOCA or a Main Steam Line Break (MSLB). The LOC is the controlling peak pressure transient and long term temperature transient for the containment, while the MSLB is the controlling short-term peak temperature transient for the containment. The peak pressure calculated for the limiting LOCA case was 48.43 psig which is 2.1 psi above the peak pressure of 46.3 psig reported in the FSAR. This higher peak pressure is still less than the containment design pressure of 54 psig. The peak containment temperature calculated for the limiting MSLB was 381°F which is the same as the peak temperature reported in the FSAR. Containment temperature following a design basis LOCA is the controlling long term condition. In this case with one (1) containment air cooler and one (1) containment spray pump operating, the containment atmospheric temperature would stabilize at 140°F which is 14°F above the 126°F value given in the FSAR.

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Over a thirty (30) day period following a design basis accident the 140°F containment atmospheric temperature would not violate any containment equipment environmental qualifications. Even though the accident analysis assumes the single-failure criterion in the emergency power system, realistically this type of failure could be corrected in short order to provide increased containment cooling capacity. No other post-accident containment conditions are affected by this 14°F temperature change.

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While Alabama Power Company is highly confident of not exceeding the containment peak design limits, the temperature and pressure calculations will be subjected to a final verification within three weeks. If, in the unlikely event, this final verification should yield results different than those reported herein, the NRC will be notified immediately.

Based on this information, Alabama Power Company proposes the enclosed amendment to the Joseph M. Farley Nuclear Plant - Facility Operating License NPF-8, Technical Specifications. The peak containment pressure (Pa) will be revised accordingly at a later date, if necessary. It is requested that approval of this change to the Technical Specifications be granted before 5:00 P.M., CDT, August 27, 1981. It is also requested that the Temporary Technical Specification change submitted in the above referenced letters be withdrawn.

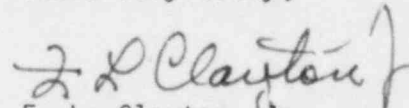
This proposed change to the Technical Specifications has been reviewed by the Plant Operations Review Committee and the Nuclear Operations Review Board and has been determined not to involve an unreviewed safety question as shown in the safety evaluation with detailed bases included as Attachment 2.

This item is designated Class III according to 10CFR170.22 requirements. The check for \$4,000 to cover the fees required was submitted by my letter of August 24, 1981.

In accordance with 10CFR50.30(c)(1)(i), three signed originals and thirty-seven (37) additional copies of this proposed change are enclosed.

If you have any questions, please advise.

Yours very truly,

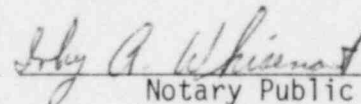
  
F. L. Clayton, Jr.

FLCJr:BDM:aw

Enclosure

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

SWORN TO AND SUBSCRIBED BEFORE ME  
THIS 27TH DAY OF AUG., 1981.

  
Notary Public

My Commission Expires:

2-2-82

SAFETY EVALUATION FOR CHANGE  
TO CONTAINMENT COOLING SYSTEM  
TECHNICAL SPECIFICATION

I. BACKGROUND

At 6:00 a.m. on August 21, 1981 while performing operability checks, the motor for the D Containment Cooling Fan was found to be inoperable. At this time Containment Cooling Fan D was declared inoperable and the seven-day ACTION statement was invoked. After exceeding the seven-day ACTION statement, Unit 2 must be placed in HOT SHUTDOWN.

In Alabama Power Company letters to the NRC dated August 24 and 25, 1981, we requested an extension of the LCO of twenty-three (23) and forty (40) days respectively to allow continued operation of Unit 2 until repairs can be completed on D Containment Cooling Fan.

In reviewing the effect of one inoperable cooling fan in the accident analysis presented in Section 6.2.1 of the Farley FSAR, it was determined that sufficient margin is maintained. The result of this analysis is discussed below. Therefore, Alabama Power Company proposes to change Technical Specification 3.6.2.3 to require only one containment cooling fan per fan group operable.

II. REFERENCE

Joseph M. Farley Nuclear Plant Unit 2 Technical Specification 3.6.2.3.

III. BASES

A. Introduction

The containment cooling system consists of four containment air coolers each with one-third cooling capacity during normal operation.

The containment spray system consists of two redundant trains each with a pump and spray ring header including nozzles and associated piping.

The containment cooling system and the containment spray system are redundant to each other in providing post accident cooling of the containment atmosphere.

The accident analysis presented in Section 6.2.1 of the Farley FSAR assumes that containment cooling capability is reduced to one of two containment spray pumps and two out of four fan coolers. This is the minimum equipment available considering the single-failure criterion in the emergency power, the containment spray, and the containment cooling systems.

## II. A. (cont'd)

Analyses have been performed to assess the effects of the availability of one (1) containment air cooler and one (1) containment spray pump on containment pressure/temperature response. The analyses show that the LOCA is the controlling pressure transient and long term temperature transient for the containment, while the main steam line break is the controlling short-term peak temperature transient for the containment. The peak pressure calculated for the limiting LOCA case was 48.43 psig which is 2.1 psi above the previous calculated peak of 46.3 psig reported in the FSAR. This higher peak pressure is still less than the containment design pressure of 54 psig. The peak containment temperature generated by a MSLB is unchanged from the previous analyses. The long term temperature for the LOCA was found to increase by 14°F over the 30-day period.

The effect of this slight increase in temperature has been evaluated and does not impact plant design limits with respect to environmental qualification of equipment. Sufficient margin exists between the qualification temperature of equipment located inside containment and the post LOCA temperature profile presented in the FSAR such that the 14°F increase does not invalidate the environmental qualification of the Farley equipment. In addition, the calculated peak containment internal pressure (Pa) will be revised accordingly at a later date.

## B. Conclusion

The proposed change to Technical Specification 3.6.2.3 does not involve an unreviewed safety question as defined by 10CFR50.59. This Technical Specification Change will not affect the safe operation of the Farley Nuclear Plant Unit 2.