



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

FOR FACILITY OPERATING LICENSE NO. NPF-2

ALABAMA POWER COMPANY

JOSEPH M. FARLEY

NUCLEAR PLANT UNIT NO. 1

DOCKET NO. 50-348

Introduction

By letter dated April 26, 1978, Alabama Power Company (APC) requested an amendment to Facility Operating License No. NPF-2 for the Joseph M. Farley Nuclear Plant, Unit No. 1. The proposal would: (1) clarify the action requirements to the limiting conditions for the operation of the reactor coolant system leakage detection systems, (2) allow the reactor coolant pumps and the residual heat removal pumps to be secured for one hour during decay heat removal operation, (3) provide for another senior member on the Nuclear Operations Review Board, and (4) make minor editorial changes. Certain revisions were made to the proposed amendment and were discussed with and accepted by APC. The proposed option for a qualified advisor instead of the qualified Supervisor for Chemistry and Health Physics would conflict with the intent of Regulatory Guide 1.8 (September 1975). APC agreed not to pursue this option during discussions with us.

Discussion and Evaluation

1. Reactor Coolant System Leakage Detection System

APC proposed a change to clarify the ACTION statement in Technical Specification 3.4.6.1. There are three leakage detection systems R-11, R-12 and the containment air cooler condensate level monitoring system. For operating MODES 1, 2, 3 and 4, R-11 and one of the other two systems must be in operation. If this limiting condition for operation is not met the ACTION statement permits continued operation up to MODE 1 for a limited time if certain conditions are met then requires the plant to be down to MODES 4 and 5 within specified times. The intent is that if either the R-11 system or both of the other systems become inoperable, operation could continue for a limited time if compensatory action is taken. As presently worded, the ACTION

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statement refers to two systems, rather than two conditions (3.4.6.1a and b) which involve three systems. We have reworded the ACTION statement consistent with our original intent to clarify this editorial problem called to our attention by APC.

Another change to this specification which we consider prudent is to reduce the time allowed for operation above MODE 4 under conditions specified in the ACTION statement, from 30 days to seven days. This reduction in time takes into account that a single additional failure could cause loss of all leak detection capability. Our change reduces the probability of being without continuous coolant leak detection in the event of an accident. The licensee has agreed to this change. Therefore, the ACTION statement for Technical Specification 3.4.6.1, modified as discussed above, is appropriate and acceptable.

2. Securing Reactor Coolant Pumps and Residual Heat Removal (RHR) Pumps During Decay Heat Removal

With the Reactor shut down, Technical Specification 3.4.1 requires that either one reactor coolant pump or one RHR pump be in operation. This is overly restrictive since it does not allow even a momentary loss of forced flow through the core. There are two reasons for such forced flow: decay heat removal and prevention of an undetected boron dilution event. Neither of these reasons would require that forced flow be continuous. When the reactor is shut down, the only source of heat is the decay of fission products. The natural convection flow of reactor coolant is more than sufficient to provide adequate decay heat removal during the one hour limit proposed by the licensee. Reactor coolant boron dilution would be prevented by prohibiting all operations which could cause such dilution while no forced flow exists.

Being able to temporarily interrupt forced flow would provide for a more orderly transition from one cooling mode to another, e.g., shifting from decay heat removal via the steam generators to decay heat removal via the RHR system, without undue emphasis on starting one pump before stopping another.

This change is consistent with the most recent edition of the Standard Technical Specifications for Westinghouse plants. The change will also allow APC to stop all Reactor Coolant Pumps and RHR pumps for up to one hour while in MODES 3, 4, or 5 to investigate and correct a problem.

Based on the foregoing, we conclude that the licensee's proposal to allow all of the above-mentioned pumps to be stopped during reactor shut down (MODES 3, 4, or 5 operation) for up to one hour is acceptable.

3. Additional Member for Nuclear Operations Review Board (NORB)

Specification 6.5.2.6 requires that a senior member of management be chairman of each NORB meeting. The present specification requires only two members of the NORB to be senior managers. These are the Senior Vice President and the Vice President-Production, who serve as the NORB's Chairman and Vice Chairman, respectively. The duties of the NORB are such that it is sometimes necessary to call an emergency meeting of the NORB when neither the Chairman nor the Vice Chairman is available to convene the NORB. This has happened in the past.

To alleviate this situation, APC has proposed to create an Alternate Vice Chairman position on the NORB. This position would be filled by the Vice President-Power Supply Services, who, as a senior manager, would be qualified to convene the NORB. We conclude, therefore, that this change is acceptable.

4. Other Changes

The two penetration room filtration systems (PRFS) serve both the ECCS Pump Room and the spent fuel pool room. These systems are independent of one another, and can be aligned to either the ECCS Pump Room or to the spent fuel pool room. Present Technical Specification 3.7.8.1 requires that both PRFS's be aligned to the spent fuel room during operation in MODES 1, 2, 3 and 4. We consider it to be more desirable to have one PRFS aligned to the ECCS Pump Room during MODES 1, 2, 3 and 4. This is already provided for in Specifications 3.9.12 and 3.9.13 governing the alignment of the PRFS. We find that the phrase "and aligned to the spent fuel pool room" in Specification 3.7.8.1 is inconsistent with our intent, as expressed in Specifications 3.9.12 and 3.9.13, and therefore conclude that it should be deleted as proposed by APC.

The other change involves correction of a typographical error in Specification 6.5.2.7.i. The section of 10 CFR that should be referenced is Section 50.59 which deals with the topics covered by that Specification.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR§ 51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: November 13, 1978