SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 46 TO FACILITY OPERATING LICENSE NO. NPF-2

AND AMENDMENT NO. 37 TO FACILITY OPERATING LICENSE NO. NPF-8

ALABAMA POWER COMPANY

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-348 AND 50-364

Introduction

By letter dated March 4, 1983, Alabama Power Company (APCo) proposed changes to the Technical Specifications relating to charcoal filters. The NRC staff did not consider that APCo had sufficiently justified the requested changes. During the course of several telecon discussions in June, July and August 1983, we advised APCo of our concerns relating to the testing criteria being proposed.

Subsequently, by letter dated March 1, 1984, in response to the NRC staff concerns, APCo provided modifications to the original proposal along with a more detailed bases for the purposed changes. Our discussion and evaluation follows.

Discussion

Certain banks of charcoal filters are used to absorb the airborne radicactivity following a postulated loss-of-coolant-accident (LOCA). The Control Room Emergency Air Filtration System and the Penetration Room Air Filtration System both contain charcoal filter banks to assure that the radiation exposures to personnel would remain within guidelines of 10 CFR 50, Appendix A, General Design Criteria 19. Also, the containment purge exhaust filter assures that any airborne radioactivety resulting from a postulated fuel handling accident during refueling would be absorbed prior to reaching the environment. Technical Specification surveillance requirements are necessary to assure that licensees use Commission approved testing methods and criteria for testing the charcoal filter radioactivity absorber's efficiency.

Evaluation

The originally issued Technical Specifications for the Farley Nuclear Plant referenced the analysis techniques and acceptance criteria of Regulatory Guide (RG) 1.52, Revision 2, March 1978. These references may have led to misinterpretations of test methods and efficiency requirements as evidenced in Licensee Event Report 83-006, an event which occurred on February 15, 1983. For these reasons APCo proposed changes to the Technical

Specifications by letter dated March 4, 1983, supplemented March 1, 1984, which we have evaluated. Briefly stated the changes would:

(1) lower the HEPA and charcoal filter system surveillance leak test acceptance requirement from 99.95% (RG 1.97) to 99.5% removal efficiency,

(2) specify specific laboratory charcoal testing methyl iodide removal efficiencies that are consistent for iodine removal credit allowed by the staff and specified in the Final Safety Evaluation Report, and

(3) specify the latest NRC staff approved testing methods to be used for performing HEPA and charcoal filter leak testing and also charcoal filter laboratory methyl iodide testing.

Our review indicates that the overall iodine removal efficiency, as shown in the enclosed Table is above the iodine removal credit considered in the NRC staff Safety Evaluation when the license was granted. Therefore, new Technical Specifications as proposed in the March 1, 1984, APCo letter are acceptable on this basis.

Safety Summary

On the basis of our review we conclude that these Technical Specification changes would result in no significant increase in accident-related site boundary doses from doses determined in the earlier analysis reported in the Farley, Unit Nos. 1 and 2, Safety Evaluation when the plants were licensed.

Environmental Consideration

This amendment involves a change in the installation or use of a facility component located within the restricted area. The staff has determined that the amendment involves no significant increase in the amounts of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupation radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: June 22, 1984
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ATTACHMENT

TABLE

OVERALL ESF FILTER SYSTEM
IODINE REMOVAL EFFICIENCY

Filter System	Tech Spec Leak Test Efficiency	Tech Spec Methyl Iodide Test Efficiency	Overall Iodine removal Efficiency*	Iodine Removal Credit Allowed by Staff for Organic and Elemental Iodine
Control Room				
Inlet (with heaters)	≥ 99.5%	≥ 99.825%	≥ 99.32%	99%
Recirculation	≥ 99.5%	≥ 99.0%	≥ 98.50%	95%
Penetration Room (Fuel Handling Accident and LOCA) (no heaters)	≥ 99.5%	≥ 95.0%	≥ 94.42%	90% for Elemental and 70% for Organic
Containment Purge Exhaust (Fuel Handling Accident Inside Containment) (no heaters)	≥ 99.5%	≥ 90.0%	≥ 89.55%	90% for Elemental and 70% for Organic (Unit 1) 30% Organic (Unit 2)

*Calculated removal efficiency for Organic Iodine; Elemental iodine should be greater.