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AUG 27 1981

Docket No. 50-364

Mr. F. L. Clayton
Senior Vice President
Alabama Power Company
Post Office Box 2641
Birmingham, Alabama 35291

Dear Mr. Clayton:

The Commission has issued the enclosed Amendment No. 7 to Facility Operating License No. NPF-8 for the Joseph M. Farley Nuclear Plant, Unit No. 2. The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated August 24, 1981, supplemented by letters dated August 25, 1981 and August 27, 1981.

The amendment redefines a group of containment cooling fans to be one fan instead of two fans. Analysis has shown one fan in each of two fan groups (originally defined as two fans per group) is required.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

ORIGINAL SIGNED

Edward A. Reeves, Project Manager
Operating Reactors Branch #1
Division of Licensing

Enclosures:
1. Amendment No. 7 to NPF-8
2. Safety Evaluation
3. Notice of Issuance

cc w/enclosure:
See next page

no legal objection to issuance or notice (by phone Edk)

OFFICE	ORB#1:DL	ORB #1:DL	ORAB:DSF	ORB#1:DL	AD/OR:DL	OELD	
SURNAME	CParrish	EReeves:ds	JOlshinski	SVarga	TNovak	D. Swanson	
	8/27/81	8/27/81	8/27/81	8/27/81	8/27/81	8/27/81	

Mr. F. L. Clayton
Alabama Power Company

cc: Mr. W. O. Whitt
Executive Vice President
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Birmingham, Alabama 35291

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Chairman
Houston County Commission
Dothan, Alabama 36301

Mr. Robert A. Buettner, Esquire
Balch, Bingham, Baker, Hawthorne,
Williams and Ward
Post Office Box 306
Birmingham, Alabama 35201

George S. Houston Memorial Library
212 W. Burdeshaw Street
Dothan, Alabama 36303

Resident Inspector
U. S. Nuclear Regulatory Commission
Post Office Box 24-Route 2
Columbia, Alabama 36319

State Department of Public Health
ATTN: State Health Officer
State Office Building
Montgomery, Alabama 36104

Regional Radiation Representatives
EPA Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30308

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

ALABAMA POWER COMPANY

DOCKET NO. 50-364

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 7
License No. NPF-8

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Alabama Power Company (the licensee) dated August 24, 1981, supplemented August 25, 1981 and August 27, 1981, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-8 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 7 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 27, 1981

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 7 TO FACILITY OPERATING LICENSE NO. NPF-8

DOCKET NO. 50-364

Revise Appendix A as follows:

Remove Page	Insert Page
3/4 6-13	3/4 6-13

CONTAINMENT COOLING SYSTEM

LIMITING CONDITIONS FOR OPERATION

3.6.2.3 Two independent groups of containment cooling fans shall be OPERABLE with one fan in each group.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With one group of the above required containment cooling fans inoperable and both containment spray systems OPERABLE, restore the inoperable group of cooling fans to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With two groups of the above required containment cooling fans inoperable, and both containment spray systems OPERABLE, restore at least one group of cooling fans to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. Restore both above required groups of cooling fans to OPERABLE status within 7 days of initial loss or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

c. With one group of the above required containment cooling fans inoperable and one containment spray system inoperable, restore the inoperable spray system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. Restore the inoperable group of containment cooling fans to OPERABLE status within 7 days of initial loss or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.3 Each group of containment cooling fans shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by:

   1. Starting each fan group (unless already operating) from the control room, and verifying that each fan group operates for at least 15 minutes.

   2. Verifying a cooling water flow rate of greater than or equal to 1600 gpm to each cooler group.

b. At least once per 18 months by verifying that each fan group starts automatically on a safety injection test signal.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 7 TO FACILITY OPERATING LICENSE NO. NFP-8

ALABAMA POWER COMPANY

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT NO. 2

DOCKET NO. 50-364

Introduction

By letter dated August 24, 1981, supplemented by letter dated August 25, 1981 Alabama Power Company (APCo) proposed a one-time Technical Specification change. The change involved the failure of one of the four containment cooling fans at Farley Unit 2. The fan failure placed the plant into a Technical Specification Action Statement requiring plant shutdown in seven days unless the fan could be repaired. APCo stated that repairs could be accomplished only at cold shutdown because of limited personnel stay times in containment.

Since the next cold shutdown was scheduled about October 5, 1981, APCo modified the proposal of August 24 to be a one-time extension of the seven day allowable outage to 47 days. Their evaluation showed that the extended time would also allow them to be better prepared to perform the fan repairs and other plant repairs after the summer peak load period. Subsequent analysis indicated that the original plant design of fan coolers may have been overconservative.

Therefore, by letter dated August 27, 1981, APCo withdrew its proposal for a one-time extension to 47 days. Instead APCo proposed a redefinition of the number of containment cooler fans required. This resulted in a new Technical Specification proposal evaluated herein. The proposal would define a fan group as one fan instead of two fans. This would eliminate the need to shutdown the plant in seven days if any one of four fans became inoperable.

Discussion

The containment heat removal system for the Farley Nuclear Plant, Unit 2, consists of four containment cooling fans (fan coolers) and two containment spray systems. The components are divided between two emergency trains, each possessing two fan cooler units and one containment spray system and powered from a separate diesel generator in the event of loss of offsite power.

During normal plant operation three fan coolers are used to control containment heat loads. During normal operation each fan cooler is run at high speed and has one-third heat removal capability. Should an accident signal occur all four fan coolers receive a start signal and automatically go to low speed. Each fan cooler was originally designed for a 25% containment heat removal capability under accident conditions. Each of the containment spray systems was originally designed for a 50% containment heat removal capability under accident conditions. Therefore each of the separate emergency trains of fans and pumps was designed for 100% containment heat removal capability with all components operable.

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. The action statement of Technical Specification 3.6.2.3.a states that the fan cooler unit must be repaired within seven days or Unit 2 must be placed in Hot Shutdown. Although APCo estimates that the fan cooler repairs would require only three to four days effort under optimum conditions, the radiation levels and the elevated temperature inside containment (approximately 110-112°F) would necessitate shutting down the plant to cold shutdown before maintenance workers could enter containment. Due to large summer electricity needs and the critically low water levels at the hydroelectric storage reservoirs, the licensee has asked to defer the fan cooler repairs. The next scheduled extended outage for Farley Unit 2 is not later than the week of October 5, 1981. The licensee has proposed to defer the fan cooler repairs to this time. By deferring the fan cooler maintenance to the next scheduled plant shutdown, the licensee can both avoid shutting down the Farley Unit 2 facility during this critical time of power need and better utilize the shutdown period since more time will be available for planning and preparation for maintenance and design improvements.

By letters dated August 24 and 25, 1981, APCo proposed a one-time only Technical Specification change to extend the seven day action statement of Specification 3.6.2.3.a by 40 days (47 days total). This extension would allow the licensee to repair the fan cooler motor during the scheduled October outage.

Subsequently by letter dated August 27, 1981, APCo showed by analysis (included in the Evaluation below) that the Limiting Condition for Operation (LCO) requiring that all four containment fan coolers be operable in Modes 1, 2 and 3 was overly conservative. Revised accident analysis showed that the limiting Loss of Coolant Accident (LOCA) and Main Steam Line Break (MSLB) could be adequately handled assuming the loss of a diesel generator concurrent with the loss of a fan cooler from the unaffected train. Due to the revised analysis, the licensee proposed that the LCO be changed such that only one of two fan coolers in each group be required to be operable. This new proposal negates the need for the temporary 40 day extension to action statement 3.6.2.3.a.

Evaluation

The accident analysis presented in Section 6.2.1 of the Farley Final Safety Analysis Report (FSAR) only requires that two of the four fan coolers and one of the two containment spray pumps be operable. Considering loss of offsite power and the single failure of an emergency diesel generator, the containment heat removal system would still provide for 100% heat removal capability during the post-accident mode.

The licensee's proposal, however, can lead to a scenario more severe than that analyzed in the FSAR. The proposal leaves only one fan cooler and one spray pump in each operating train. If a LOCA was postulated concurrent with loss of offsite power and the single failure of a diesel generator, the facility would only have 75% of the design post-accident containment heat removal capability.

The licensee has submitted reanalysis of the limiting pressure and temperature calculations for containment design assuming only one fan cooler and one containment spray pump operable. The licensee has shown that design of the original containment heat removal capacity was overly conservative. Analysis shows that by using only 75% of the design value, the containment heat removal needs were adequately supplied. The limiting pressure calculation (due to LOCA) increased by 2.1 psi to 48.4 psig. Sufficient margin still exists below the containment design pressure of 54.0 psig. The long term containment pressure profile remains virtually unchanged. The limiting temperature calculation (due to a MSLB) remains the same at 381°F. This is because the containment spray system dominates the temperature transient in containment. The licensee assumed a 5% reduction in the containment spray flow rate which adds further conservatism to the calculations.

Conclusion

We have reviewed the licensee's proposed amended Technical Specification changes and the supporting analysis. We conclude that the proposed change does not involve an unreviewed safety question and will not affect the safe operation of the facility. Therefore, we find the proposed Technical Specification change acceptable.

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 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: August 27, 1981

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-364

ALABAMA POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 7 to Facility Operating License No. NPF-8 issued to Alabama Power Company (the licensee), which revised Technical Specifications for operation of the Joseph M. Farley Nuclear Plant, Unit No. 2 (the facility) located in Houston County, Alabama. The amendment is effective as of the date of issuance.

The amendment redefines a group of containment cooling fans to be one fan instead of two fans. Analysis has shown one fan in each of two fan groups (originally defined as two fans per group) is required.

The application for amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since this amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated August 24, 1981, supplemented August 25, 1981 and August 27, 1981, (2) Amendment No. 7 to License No. NPF-8, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. and at the George S. Houston Memorial Library, 212 W. Burdeshaw Street, Dothan, Alabama. 36303. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 27th day of August, 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing