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OCT 8 1982

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. 18 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 October 8, 1982.

The amendment modifies Technical Specifications for turbine valve testing to grant a waiver during the remainder of the first fuel cycle scheduled to end about October 22, 1982.

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

Sincerely,

Edward A. Reeves, Project Manager
Operating Reactors Branch No. 1
Division of Licensing

Enclosures:
1. Amendment No. 18 to NPF-8
2. Safety Evaluation
3. Notice of Issuance

cc w/enclosures:
See next page

10/8/82 4:50 PM called APCO (McCuing) and advised amendment #18 - immediately - was signed effective - Ed Reeves Project Manager ORB-1 DL

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PDR ADOCK 05000364
P PDR

no legal objections to F.R. notice and amendment.

OFFICE	ORB 1	ORB 1	ORB 1	AD/OR:DL	OELD		
SURNAME	CParrish	EReeves/rs	SVarga	GLainas	S IRELAND		
DATE	10/8/82	10/8/82	10/8/82	10/8/82	10/8/82		

NRC FORM 318 (10-80) NRCM 0240 OFFICIAL RECORD COPY USGPO: 1981—335-960

Mr. F. L. Clayton
Alabama Power Company

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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. 18
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 October 8, 1982, 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.

3. 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. 18, 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 No. 1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 8, 1982

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 18 TO FACILITY OPERATING LICENSE NO. NPF-8

DOCKET NO. 50-364

Revise Appendix A as follows:

Remove Page	Insert Page
3/4 3-72	3/4 3-72

INSTRUMENTATION

3/4.3.4 TURBINE OVERSPEED PROTECTION

LIMITING CONDITION FOR OPERATION

3.3.4 At least one turbine overspeed protection system shall be OPERABLE.

APPLICABILITY: MODES 1, 2* and 3*.

ACTION:

a. With one stop valve or one governor valve per high pressure turbine steam line inoperable and/or with one reheat stop valve or one reheat intercept valve per low pressure turbine steam line inoperable, restore the inoperable valve(s) to OPERABLE status within 72 hours, or close at least one valve in the affected steam line(s) or isolate the turbine from the steam supply within the next 6 hours.

b. With the above required turbine overspeed protection system otherwise inoperable, within 6 hours isolate the turbine from the steam supply.

c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.4.1 The provisions of Specification 4.0.4 are not applicable.

4.3.4.2 The above required turbine overspeed protection system shall be demonstrated OPERABLE:

#a. At least once per 7 days when the DEH valve test feature is OPERABLE by cycling each of the following valves through at least one complete cycle from the running position.

1. Four high pressure turbine stop valves.
2. Four high pressure turbine governor valves.
3. Four low pressure turbine reheat stop valves.
4. Four low pressure turbine reheat intercept valves.

#b. If the DEH valve test feature is inoperable, restore the test feature to OPERABLE status as soon as possible and verify that the governor valves are capable of valve motion at least once per 7 days.

*Specification not applicable with all main steam isolation valves and associated bypass valves in the closed position and all other steam flow paths to the turbine isolated.

#The provisions of Surveillance Requirements 4.3.4.2.a and 4.3.4.2.b are not applicable during the remainder of the first refueling cycle.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 18 TO FACILITY OPERATING LICENSE NO. NPF-8

ALABAMA POWER COMPANY

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT NO. 2

DOCKET NO. 50-364

Introduction

Farley Unit 2 Technical Specification 3/4.3.4, Turbine Overspeed Protection, specifies periodic surveillance tesing of turbine valves to demonstrate valve operability. The surveillance requirements necessitate all turbine stop, governor, reheat stop and reheat intercept valves to be stroked through their complete cycle from their operational position on a weekly basis.

Due to the end of fuel cycle conditions, adherence to this test schedule would impose significant operational difficulties. Therefore, on October 8, 1982, Alabama Power Company submitted a proposed change to the Technical Specifications which would exempt testing as required by surveillance requirements 4.3.4.1.2.a and 4.3.4.1.2.b. This proposed change will only be for the duration of the current fuel cycle which is expected to end in late October 1982. The exemption is expected to waive approximately two turbine valve tests as required by the technical specifications.

Evaluation

Steam enters the high pressure turbine through four throttle valves in series with four governor valves. Steam exists the high pressure turbine, flows through the moisture separator reheaters, and enters the low pressure turbines through four reheat stop valves in series with four reheat intercept valves. The turbine is equipped with an emergency trip system that is designed to close the throttle, governer, reheat stop and reheat intercept valves in the event of turbine overspeed, low bearing oil pressure, low vacuum, or thrust bearing failure. An electric solenoid trip is provided for remote manual trips and various other trips. Turbine trip is effected by three overspeed sensors. The primary overspeed controls is provided by the Digital Electro-Hydraulic Control System which is set to produce a turbine trip at 103% of rated shaft speed. The first backup overspeed protection is provided by a mechanical overspeed mechanism and trips the turbine at 111% of rated shaft speed. The secondary backup overspeed protection is provided by the electro-hydraulic control system if the rated shaft speed exceeds 111.5%. This redundancy in both valves and overspeed protection controls provides high assurance that turbine speed control will be maintained.

End of fuel cycle conditions has resulted with Farley Unit 2 operating with all control rods out of the core along with a boron concentration of approximately 40 ppm. In order to perform the turbine valve tests required by the technical specifications, the unit must be reduced to approximately 85% power. This would require boration to reduce core power followed by deboration to increase power back to 100%.

As the reactor core nears end-of-life, cycling of the nuclear steam supply system imposes operational difficulties in maintaining the axial flux difference within the Technical Specification target band limitation and results in a potential restriction of 50% power for 24 hours. The return to full power following turbine valve tests performed near the end of reactor core life necessitates the processing of significant amounts, approximately 20,000 gallons of reactor coolant. In returning to full power, additional operational difficulties occur from overcoming negative reactivity due to xenon transients.

These power transients and the potential for delays in the return to power from turbine valve tests performed during the end of reactor core life are unnecessary as the turbine valves and overspeed protection system have been demonstrated as highly reliable. Alabama Power Company has reviewed the results of the weekly performances of the Unit 2 turbine valve technical specification surveillance requirement and valve operation during Unit 2 turbine trips and has determined that no turbine valve has failed to close on demand. Additionally, turbine valves on Unit 1, identical models to Unit 2, have never failed to fully close on demand during associated turbine valve test and turbine trips. These results are based on 40 turbine trips and 69 valve tests for Unit 2 and 118 turbine trips and over 90 valve tests for Unit 1. This history of trouble-free valve operation provides added assurance of the dependability of these valves and the redundant overspeed protection systems. In addition to the turbine governor and throttle valves, the main steam isolation valves which are periodically tested, provide another mechanism to terminate steam flow to the turbine.

Summary

We concur with the licensee that additional cycling of the nuclear steam supply system that would result from performing the scheduled turbine valve tests would result in significant operational difficulties at the Farley Unit 2 facility. In addition, we concur with the licensee that the proven reliability of the turbine valves provides an acceptable basis to defer surveillance testing of these valves for the duration of the current fuel cycle. The current fuel cycle is scheduled to end in late October 1982 and approximately two turbine tests will be deleted.

Therefore, based on our review, we conclude that the proposed one-time change to Technical Specification 3/4.3.4 is 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 an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety, 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: OCT 8 1982

Principal Contributors:
D. Pickett
E. Reeves

7590-01

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. 18 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 modifies Technical Specifications for turbine valve testing to grant a waiver during the remainder of the first fuel cycle scheduled to end about October 22, 1982.

The application for the 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 licence 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 October 8, 1982, (2) Amendment No. 18 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 8th day of October 1982.

FOR THE NUCLEAR REGULATORY COMMISSION

Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing