JUL 2 9 1977

Docket No. 50-348

Alabama Power Company
ATTN: Mr. Alan R. Barton
Senior Vice President
600 North 18th Street
Birmingham, Alabama 35291

Gentlemen:

SUBJECT: ISSUANCE OF AMENDMENT NO. 1 TO FACILITY OPERATING LICENSE NO. NPF-2 FOR FARLEY NUCLEAR PLANT, UNIT NO. 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 1 to Facility Operating License No. NPF-2 which is effective as of July 15, 1977, the date that emergency authorization was provided to you for a change in the Technical Specifications noted below for the Joseph M. Farley Nuclear Power Plant, Unit No. 1. Amendment No. 1 revises the Technical Specifications, Appendix A to the Facility Operating License to allow control rod drop time measurements. The license is amended by making the appropriate changes to Specifications 3.1.3.3, 3.10.5 and 3/4 10.5 on pages 3/4 1-20, 3/4 10-5 and B 3/4 10-1 of Appendix A to the license.

We have determined that Amendment No. 1 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 Section 51.5(d)(4), that an environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

A copy of the Federal Register Notice of Issuance of Amendment No. 1 and the related Safety Evaluation supporting Amendment No. 1 to License No. NPF-2 are also enclosed.

Sincerely,

Original Signed by

John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

Const 1
GD

Enclosures & cc: SEE PREVIOUS YELLOW FOR CONCURRENCES

OFFICE	See Page 2 LWR 1	LWR 1	OELD	LWR 1		
SURNAME	EHylton/red	RMartin	DSwanson	JStolz		
DATE	7/ /77	7/ /77	7/27/77	7/29/77		

NRC FORM 318 (9-76) NRCM 0240 ☆ U. S. GOVERNMENT PRINTING OFFICE: 1976 — 626-624

Docket No. 50-348

Alabama Power Company
ATTN: Mr. Alan R. Barton
Senior Vice President
600 North 18th Street
Birmingham, Alabama 35291

Gentlemen:

SUBJECT: ISSUANCE OF AMENDMENT NO. 1 TO FACILITY OPERATING LICENSE NO. NPF-2 FOR FARLEY NUCLEAR PLANT, UNIT NO. 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 1 to Facility Operating License No. NPF-2 which is effective as of the date of issuance. Amendment No. 1 revises the Technical Specifications, Appendix A to the Facility Operating License to allow control rod drop time measurements. The license is amended by making the appropriate changes to Specifications 3.1.3.3, 3.10.5 and 3/4 10.5 on pages 3/4 1-20, 3/4 10-5 and B 3/4 10-1 of Appendix A to the license.

We have determined that Amendment No. 1 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 Section 51.5(d)(4), that an environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

A copy of the Federal Register Notice of Issuance of Amendment No. 1 and the related Safety Evaluation supporting Amendment No. 1 to License No. NPF-2 are also enclosed.

Sincerely,

John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

Enclosures & cc:
See Page 2

OFFICE ➤	LWR-#1	LWR-#1	OELD	LWR-#1		
SURNAME ➤	EHylton:klj	RMartin	DSwanson	JStolz		
DATE ➤	7/26/77	7/26/77	7/28/77	7/ /77		

1. Amendment No. 1 to License No. NPF-2
2. Federal Register Notice
3. Safety Evaluation Supporting Amendment No. 1 to License No. NPF-2

cc w/enclosures:

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Shaw, Pittman, Potts & Trowbridge
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Washington, D. C. 20036

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Vice President
Southern Company Services
P. O. Box 2625
Birmingham, Alabama 35202

Ira L. Myers, M.D.
State Health Officer
State Department of Public Health
State Office Building
Montgomery, Alabama 36104

Honorable A. A. Middleton
Chairman
Houston County Commission
Dothan, Alabama 36301

OFFICE ➤						
SURNAME ➤						
DATE ➤						

ALABAMA POWER COMPANY

DOCKET NO. 50-348

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 1
License No. NPF-2

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

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

   B. 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;

   C. 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

   D. 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-2 is hereby amended to read as follows:

   2.C.(2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 1, are hereby incorporated in the license. Alabama Power Company shall operate the facility in accordance with the Technical Specifications.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

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

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by

John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

Attachment:
Changes to the Technical
Specifications

Date of Issuance: JUL 15 1977

OFFICE ➤	LWR-#1	LWR-#1	OELD	LWR-#1		
SURNAME ➤	E[illegible]ton:klj	RMartin	D SWANSON	JStolz		
DATE ➤	7/26/77	7/26/77	7/28/77	7/29/77		

ATTACHMENT TO LICENSE AMENDMENT NO. 1

FACILITY OPERATING LICENSE NO. NPF-2

DOCKET NO. 50-348

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

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OFFICE ➤						
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DESIGN FEATURES

POSITION INDICATOR CHANNELS OPERATING

LIMITING CONDITION FOR OPERATION

3.1.3.2 All shutdown, control and part length control rod position indicator channels and the demand position indication system shall be OPERABLE and capable of determining the control rod positions within ± 12 steps.

APPLICABILITY: MODES 1 and 2.

ACTION:

a. With a maximum of one rod position indicator channel per group inoperable either:

   1. Determine the position of the non-indicating rod(s) indirectly by the movable incore detectors at least once per 8 hours and immediately after any motion of the non-indicating rod which exceeds 24 steps in one direction since the last determination of the rod's position, or

   2. Reduce THERMAL POWER TO < 50% of RATED THERMAL POWER within 8 hours.

b. With a maximum of one demand position indicator per bank inoperable either:

   1. Verify that all rod position indicators for the affected bank are OPERABLE and that the most withdrawn rod and the least withdrawn rod of the bank are within a maximum of 12 steps of each other at least once per 8 hours, or

   2. Reduce THERMAL POWER to < 50% of RATED THERMAL POWER within 8 hours.

c. The provision of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.1.3.2 Each rod position indicator channel shall be determined to be OPERABLE by verifying the demand position indication system and the rod position indicator channels agree within 12 steps at least once per 12 hours except during time intervals when the Rod Position Deviation Monitor is inoperable, then compare the demand position indication system and the rod position indicator channels at least once per 4 hours.

POSITION INDICATOR CHANNELS - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.3.3 At least one rod position indicator channel (excluding demand position indication) shall be OPERABLE for each shutdown, control or part length rod not fully inserted.

APPLICABILITY: MODES 3,*# 4*# and 5*#

ACTION: With less than the above required position indicator channels OPERABLE, immediately open the reactor trip system breakers.

SURVEILLANCE REQUIREMENTS

4.1.3.3 Each of the above required rod position indicator channels shall be determined to be OPERABLE by verifying the demand position indication system and the rod position indicator channels agree within 12 steps at least once per 24 hours.

*With the reactor trip system breakers in the closed position.

#See Special Test Exception 3.10.5.

SPECIAL TEST EXCEPTION

POSITION INDICATOR CHANNELS SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.10.5 The limitations of Specification 3.1.3.3 may be suspended during the performance of individual full length (shutdown and control) rod drop time measurements provided;

a. Only one shutdown or control bank is withdrawn from the fully inserted position at a time, and

b. The rod position indicator is OPERABLE during the withdrawal of the rods.

APPLICABILITY: MODES 3, 4 and 5 during performance of rod drop time measurements.

ACTION:

With the position indicator channels inoperable, or more than one bank of rods withdrawn, immediately open the reactor trip breakers.

SURVEILLANCE REQUIREMENTS

4.10.5 The above required rod position indicator channels shall be determined to be OPERABLE by verifying the demand position indication system and the rod position indicator channels agree within 12 steps within 24 hours prior to the start of rod drop time measurement and at least once per 24 hours thereafter.

3/4.10 SPECIAL TEST EXCEPTIONS

BASES

3/4.10.1 SHUTDOWN MARGINS

This special test exception provides that a minimum amount of control rod worth is immediately available for reactivity control when tests are performed for control rod worth measurement. This special test exception is required to permit the periodic verification of the actual versus predicted core reactivity condition occurring as a result of fuel burnup or fuel cycling operations.

3/4.10.2 GROUP HEIGHT, INSERTION, AND POWER DISTRIBUTION LIMITS

This special test exception permits individual control rods to be positioned outside of their normal group heights and insertion limits during the performance of such PHYSICS TESTS as those required to 1) measure control rod worth and 2) determine the reactor stability index and damping factor under xenon oscillation conditions.

3/4.10.3 PHYSICS TESTS

This special test exception permits PHYSICS TESTS to be performed at less than or equal to 5% of RATED THERMAL POWER and is required to verify the fundamental nuclear characteristics of the reactor core and related instrumentation.

3/4.10.4 NO-FLOW TESTS

This special test exception permits reactor criticality under no-flow conditions and is required to perform certain startup PHYSICS TESTS while at low THERMAL POWER levels.

3/4.10.5 POSITION INDICATOR CHANNELS-SHUTDOWN

This special test exception permits the position indicator channels to be inoperable during rod drop time measurements. The exception is required since the data necessary to determine the rod drop time is derived from the induced voltage in the position indicator coils as the rod is dropped. This induced voltage is small compared to the normal voltage and therefore can not be observed if the position indicator channels remain OPERABLE.

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

ALABAMA POWER COMPANY

DOCKET NO. 50-348

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 1
License No. NPF-2

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

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

   B. 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;

   C. 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

   D. 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-2 is hereby amended to read as follows:

   2.C.(2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 1, are hereby incorporated in the license. Alabama Power Company 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

John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

Attachment:
Changes to the Technical
Specifications

Date of Issuance: JUL 15 1977

ATTACHMENT TO LICENSE AMENDMENT NO. 1

FACILITY OPERATING LICENSE NO. NPF-2

DOCKET NO. 50-348

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

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APPLICABILITY: MODES 1 and 2.

ACTION:

a. With a maximum of one rod position indicator channel per group inoperable either:

   1. Determine the position of the non-indicating rod(s) indirectly by the movable incore detectors at least once per 8 hours and immediately after any motion of the non-indicating rod which exceeds 24 steps in one direction since the last determination of the rod's position, or

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   1. Verify that all rod position indicators for the affected bank are OPERABLE and that the most withdrawn rod and the least withdrawn rod of the bank are within a maximum of 12 steps of each other at least once per 8 hours, or

   2. Reduce THERMAL POWER to < 50% of RATED THERMAL POWER within 8 hours.

c. The provision of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.1.3.2 Each rod position indicator channel shall be determined to be OPERABLE by verifying the demand position indication system and the rod position indicator channels agree within 12 steps at least once per 12 hours except during time intervals when the Rod Position Deviation Monitor is inoperable, then compare the demand position indication system and the rod position indicator channels at least once per 4 hours.

POSITION INDICATOR CHANNELS - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.3.3 At least one rod position indicator channel (excluding demand position indication) shall be OPERABLE for each shutdown, control or part length rod not fully inserted.

APPLICABILITY: MODES 3,*# 4*# and 5*#

ACTION: With less than the above required position indicator channels OPERABLE, immediately open the reactor trip system breakers.

SURVEILLANCE REQUIREMENTS

4.1.3.3 Each of the above required rod position indicator channels shall be determined to be OPERABLE by verifying the demand position indication system and the rod position indicator channels agree within 12 steps at least once per 24 hours.

*With the reactor trip system breakers in the closed position.

#See Special Test Exception 3.10.5.

SPECIAL TEST EXCEPTION

POSITION INDICATOR CHANNELS SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.10.5 The limitations of Specification 3.1.3.3 may be suspended during the performance of individual full length (shutdown and control) rod drop time measurements provided;

a. Only one shutdown or control bank is withdrawn from the fully inserted position at a time, and

b. The rod position indicator is OPERABLE during the withdrawal of the rods.

APPLICABILITY: MODES 3, 4 and 5 during performance of rod drop time measurements.

ACTION:

With the position indicator channels inoperable, or more than one bank of rods withdrawn, immediately open the reactor trip breakers.

SURVEILLANCE REQUIREMENTS

4.10.5 The above required rod position indicator channels shall be determined to be OPERABLE by verifying the demand position indication system and the rod position indicator channels agree within 12 steps within 24 hours prior to the start of rod drop time measurement and at least once per 24 hours thereafter.

3/4.10 SPECIAL TEST EXCEPTIONS

BASES

3/4.10.1 SHUTDOWN MARGINS

This special test exception provides that a minimum amount of control rod worth is immediately available for reactivity control when tests are performed for control rod worth measurement. This special test exception is required to permit the periodic verification of the actual versus predicted core reactivity condition occurring as a result of fuel burnup or fuel cycling operations.

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This special test exception permits reactor criticality under no-flow conditions and is required to perform certain startup PHYSICS TESTS while at low THERMAL POWER levels.

3/4.10.5 POSITION INDICATOR CHANNELS-SHUTDOWN

This special test exception permits the position indicator channels to be inoperable during rod drop time measurements. The exception is required since the data necessary to determine the rod drop time is derived from the induced voltage in the position indicator coils as the rod is dropped. This induced voltage is small compared to the normal voltage and therefore can not be observed if the position indicator channels remain OPERABLE.

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-348

ALABAMA POWER COMPANY

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 1

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY

OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 1 to Facility Operating License No. NPF-2, issued to the Alabama Power Company which revised Technical Specifications for operation of the Joseph M. Farley Nuclear Plant, Unit 1 (the facility) located in Houston County, Alabama. The amendment was effective as of July 15, 1977.

The Amendment permits control rod drop time measurements for the purpose of testing in facility operational Modes 3, 4 and 5.

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 license amendment. Prior public notice of this amendment was not required since the 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

OFFICE ➔						
SURNAME ➔						
DATE ➔						

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) Amendment No. 1 to License No. NPF-2, and (2) the Commission s related Safety Evaluation Supporting Amendment No. 1 to License No. NPF-2. 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. Vurdeshaw Street, Dothan, Alabama 36301. A copy of items (1) and (2) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Project Management.

Dated at Bethesda, Maryland, this 29 day of JUL 1977.

FOR THE NUCLEAR REGULATORY COMMISSION

John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

- Note TYPOS on pp. 1+2
- SE* safety evaluation
- Concurrence subject to amendment of notice to reflect prior emergency amendment; F.R. notice should indicate that OL amendment is already effective.

OFFICE ➔	LWR-#1	LWR-#1	OELD DL	LWR-#1		
SURNAME ➔	EHylton:klj	RMartin	D SWANSON	JStolz		
DATE ➔	7/26/77	7/29/77	7/28/77	7/29/77		

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 1 TO LICENSE NO. NPF-2

THE ALABAMA POWER COMPANY

DOCKET NO. 50-348

INTRODUCTION

By telecopied letter dated July 15, 1977, the Alabama Power Company requested a change in the Technical Specifications appended to Facility Operating License No. NPF-2 for the Farley Nuclear Plant, Unit 1. The proposed change allows as a limiting condition for operation in Modes 3, 4 and 5 that simultaneous deenergization of both digital rod position indication system channels to accommodate control rod drop time measurement provided only one shutdown on control bank is withdrawn from the fully inserted position at a time.

DISCUSSION

The Farley Nuclear Plant, Unit 1 facility Operating License Appendix A Technical Specification 4.1.3.4 together with Technical Specification 3.1.3.3 for Modes 3, 4 and 5 imposed an operating restriction preventing the completion of the Alabama Power Company's preoperational test program required prior to entering Mode 4 (HOT SHUTDOWN). The identified Specifications precluded the applicant's ability to measure the time interval for the control rod to drop from a fully withdrawn position to the dashpot region which is necessary to complete the control rod drop time testing requirements.

The proposed changes to the Technical Specifications will allow the Alabama Power Company to accommodate the measurement of control rod drop times for preoperational testing in Modes 3, 4 and 5.

EVALUATION

We recognize that both channels of the digital rod position indication system will be required to be deenergized for brief periods of time for the purposes of preoperational testing. We also note that suspending the limitations of Technical Specification 3.1.3.3 during Modes 3, 4 and 5 while performing rod drop time measurements does not waive the reactivity shutdown margins specified in Technical Specifications 3.1.1.1 and 3.1.1.2. Therefore, the reactivity worth of any rods withdrawn for testing purposes is required to be compensated by the addition of boric acid to the reactor coolant system.

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SURNAME➤						
DATE➤						

Accordingly, we conclude that the changes in Technical Specification 3.1.3.3 do not involve any increase in the probability or consequences of accidents previously considered in our Safety Evaluation Report, Supplements 1, 2 and 3 to the Safety Evaluation Report and the Final Safety Analysis Report.

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) the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant hazards consideration, and (2) 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: JUL 29 1977

OFFICE➤	LWR #1	LWR #1				
SURNAME➤	RMartin	JFStolz				
DATE➤	7/ /77	7/29/77				

DISTRIBUTION FOR FARLEY NUCLEAR PLANT, UNIT NO. 1 AMENDMENT NO. 1 TO OPERATING LICENSE NO. NPF-2 DATED

Docket File
NRC PDR
Local PDR
LWR-#1 File
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B. Jones (4)
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J. Knight, SS
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