

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
ALABAMA POWER COMPANY	)	
	)	
	)	Docket Nos. 50-348
	)	50-364
(Joseph M. Farley Nuclear	)	
Plant, Unit Nos. 1 and 2)	)	

APPLICATION TO AMEND FACILITY  
OPERATING LICENSE NOS. NPF-2 AND NPF-8

This is an Application to amend Facility Operating License Nos. NPF-2 and NPF-8, currently held by Alabama Power Company, to allow Southern Nuclear Operating Company, Inc. (Southern Nuclear) to possess, manage, use, operate and maintain Units 1 and 2 of the Joseph M. Farley Nuclear Plant (FNP), located near Columbia, Alabama. This action involves no change in plant ownership or entitlement to electric power, no significant change in either nuclear personnel or support organizations (except for reassignment to Southern Nuclear), and accordingly qualifies as an amendment involving no significant hazards considerations.

I. INTRODUCTION

Alabama Power Company is a wholly owned subsidiary of The Southern Company, which holds all of the common stock of Alabama Power Company pursuant to the Public Utility Holding Company Act of 1935. Alabama Power Company is presently the holder of Facility Operating License Nos. NPF-2 for Unit 1 of FNP and NPF-8 for Unit 2 of FNP. Broadly stated, the terms and conditions of these licenses authorize Alabama Power Company to possess, use and

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operate both units at FNP in accordance with the Atomic Energy Act and the rules and regulations of the Nuclear Regulatory Commission (NRC). On December 17, 1990, after receiving the necessary order from the Securities and Exchange Commission (SEC), The Southern Company incorporated Southern Nuclear and acquired all of its common stock. The purpose of incorporating Southern Nuclear was to establish an organization which would consolidate personnel within the Southern electric system engaged in nuclear operations into a single, integrated organization to pursue higher degrees of performance in multiple-unit nuclear operations.

On December 21, 1990, Alabama Power Company entered into a Nuclear Services Agreement with Southern Nuclear pursuant to which Southern Nuclear provides nuclear operations support services, technical services, and administrative services associated with Alabama Power Company's operation of FNP. Execution of this Nuclear Services Agreement was a step towards the goal of Southern Nuclear becoming the licensed operator for FNP. As the next step towards this goal, Alabama Power Company seeks authority for Southern Nuclear to become the licensed operator of FNP and to have exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

Once the requested license amendments are granted, the terms and conditions governing Southern Nuclear becoming the licensed operator for FNP will be embodied in an operating agreement between Alabama Power Company and Southern Nuclear. Generally, this operating agreement will empower Southern Nuclear to be the

exclusive entity authorized to operate FNP and to make all necessary and desirable decisions to this end. Importantly, Southern Nuclear will have no entitlement to power output from FNP or authority to dispatch, broker or market the energy generated. The on-site Alabama Power Company nuclear generation organization is currently responsible for the physical operation of FNP. This organization will be transferred intact to Southern Nuclear.

## II. REQUESTED REGULATORY ACTION

This Application requests the NRC to amend Facility Operating License Nos. NPF-2 and NPF-8 to authorize Southern Nuclear, as the exclusive operating licensee, to possess, manage, use, operate and maintain FNP Units 1 and 2. More specifically, pursuant to 10 CFR 50.90, Alabama Power Company requests that the Nuclear Regulatory Commission amend Operating License Nos. NPF-2 and NPF-8 to read so that:

- (1) Southern Nuclear, pursuant to section 103 of the Atomic Energy Act of 1954, as amended, (the Act) and 10 CFR Part 50 "Domestic Licensing of Production and Utilization Facilities," is licensed to possess, manage, use, maintain and operate Farley Units 1 and 2 at the designated location in Houston County, Alabama, in accordance with the procedures and limitations set forth in the operating licenses;
- (2) Alabama Power Company, pursuant to the Act and 10 CFR Part 50, is licensed to possess but not operate the facility at the designated location in Houston County, Alabama, in accordance with the procedures and limitations set forth in the licenses;
- (3) Southern Nuclear, pursuant to the Act and 10 CFR Part 70, is licensed to receive, possess and use at

any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

- (4) Southern Nuclear, pursuant to the Act and 10 CFR Parts 30, 40 and 70, is licensed to receive, possess, and use, at any time, any by-product, source and special nuclear material as sealed neutron sources for reactor start up, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) Southern Nuclear, pursuant to the Act and 10 CFR Parts 30, 40 and 70, is licensed to receive, possess and use, in amounts as required, any by-product, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (6) Southern Nuclear, pursuant to the Act and 10 CFR Parts 30, 40 and 70, is licensed to possess, but not separate, such by-product and special nuclear materials as may be produced by the operation of FNP.

Attachment A provides the Southern Nuclear concurrence of this Application. Alabama Power Company also requests that this Application be evaluated as involving no significant hazards consideration. Attachment B is Alabama Power Company's analysis conducted pursuant to 10 CFR 50.92. Other conforming license amendments and necessary Technical Specification changes are noted in Attachments C and D. Appropriate changes in insurance and indemnity agreements will be achieved prior to the implementation date of the proposed amendments.



### III. GENERAL INFORMATION CONCERNING LICENSE AMENDMENTS

A. Name: Southern Nuclear Operating Company, Inc.

B. Address: Post Office Box 1295  
Birmingham, Alabama 35201-1295

C. Description of Business or Occupation

Southern Nuclear is a wholly owned subsidiary of The Southern Company. Southern Nuclear's Certificate of Incorporation authorizes it to engage in the business of operation of nuclear power plants, to provide associated technical and administrative services, and to provide support services in connection with such operations. Currently, Southern Nuclear provides nuclear services to Alabama Power Company and Georgia Power Company. Upon approval of the present amendment, Southern Nuclear will be authorized to possess, manage, use, operate and maintain FNP Units 1 and 2. It is anticipated that Southern Nuclear will later become similarly responsible for other licensed and operating nuclear plants; however, any such action will be dealt with in separate license amendment applications.

D. Organization and Management of Operating Corporation

Southern Nuclear is a corporation organized and existing under the laws of the State of Delaware. Its principal office is located near Birmingham, Alabama. Southern Nuclear is neither owned, controlled nor dominated by an alien or foreign corporation or a foreign government.

All directors and officers of Southern Nuclear are citizens of the United States. Their names and addresses are as follows:

### Directors

<u>Name</u>	<u>Mailing Address</u>
E. L. Addison	64 Perimeter Center East Atlanta, Georgia 30346
A. W. Dahlberg	333 Piedmont Avenue Atlanta, Georgia 30308
Elmer B. Harris	600 North 18th Street Birmingham, Alabama 35291
Joseph M. Farley	Post Office Box 1295 Birmingham, Alabama 35201-1295
R. P. McDonald	Post Office Box 1295 Birmingham, Alabama 35201-1295
H. Allen Franklin	800 Shades Creek Parkway Birmingham, Alabama 35209

### Officers

Joseph M. Farley President and Chief Executive Officer	Post Office Box 1295 Birmingham, Alabama 35201-1295
R. P. McDonald <sup>1</sup> Executive Vice President	Post Office Box 1295 Birmingham, Alabama 35201-1295
W. G. Hairston, III <sup>2</sup> Senior Vice President	Post Office Box 1295 Birmingham, Alabama 35201-1295
J. W. Averett Vice President	Post Office Box 1295 Birmingham, Alabama 35201-1295
L. B. Long Vice President	Post Office Box 1295 Birmingham, Alabama 35201-1295

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<sup>1</sup> Mr. McDonald is also currently an Executive Vice President of Alabama Power Company and of Georgia Power Company.

<sup>2</sup> Mr. Hairston is also currently a Senior Vice President of Alabama Power Company and of Georgia Power Company.

J. D. Woodard<sup>3</sup>  
Vice President

Post Office Box 1295  
Birmingham, Alabama 35201-1295

J. T. Beckham, Jr.<sup>4</sup>  
Vice President

Post Office Box 1295  
Birmingham, Alabama 35201-1295

C. K. McCoy<sup>5</sup>  
Vice President

Post Office Box 1295  
Birmingham, Alabama 35201-1295

J. O. Meier  
Secretary

Post Office Box 1295  
Birmingham, Alabama 35201-1295

R. M. Gilbert, Jr.  
Comptroller and Treasurer

Post Office Box 1295  
Birmingham, Alabama 35201-1295

W. E. Boston  
Assistant Secretary and  
Assistant Treasurer

64 Perimeter Center East  
Atlanta, Georgia 30346

F. D. Kuester  
Assistant Secretary and  
Assistant Treasurer

1 Wall Street, 42nd Floor  
New York, New York 10005

After the amendments become effective, Southern Nuclear will have three internal organizations dedicated to pursuing safe plant operations: Nuclear Operations, Technical Services, and Administrative Services. Each organization will ultimately report to the Executive Vice President and President. After the amendments become effective, the FNP Nuclear Operations organization will consist principally of the on-site personnel and some direct support personnel at corporate headquarters. Technical Services will be located at corporate headquarters, and will

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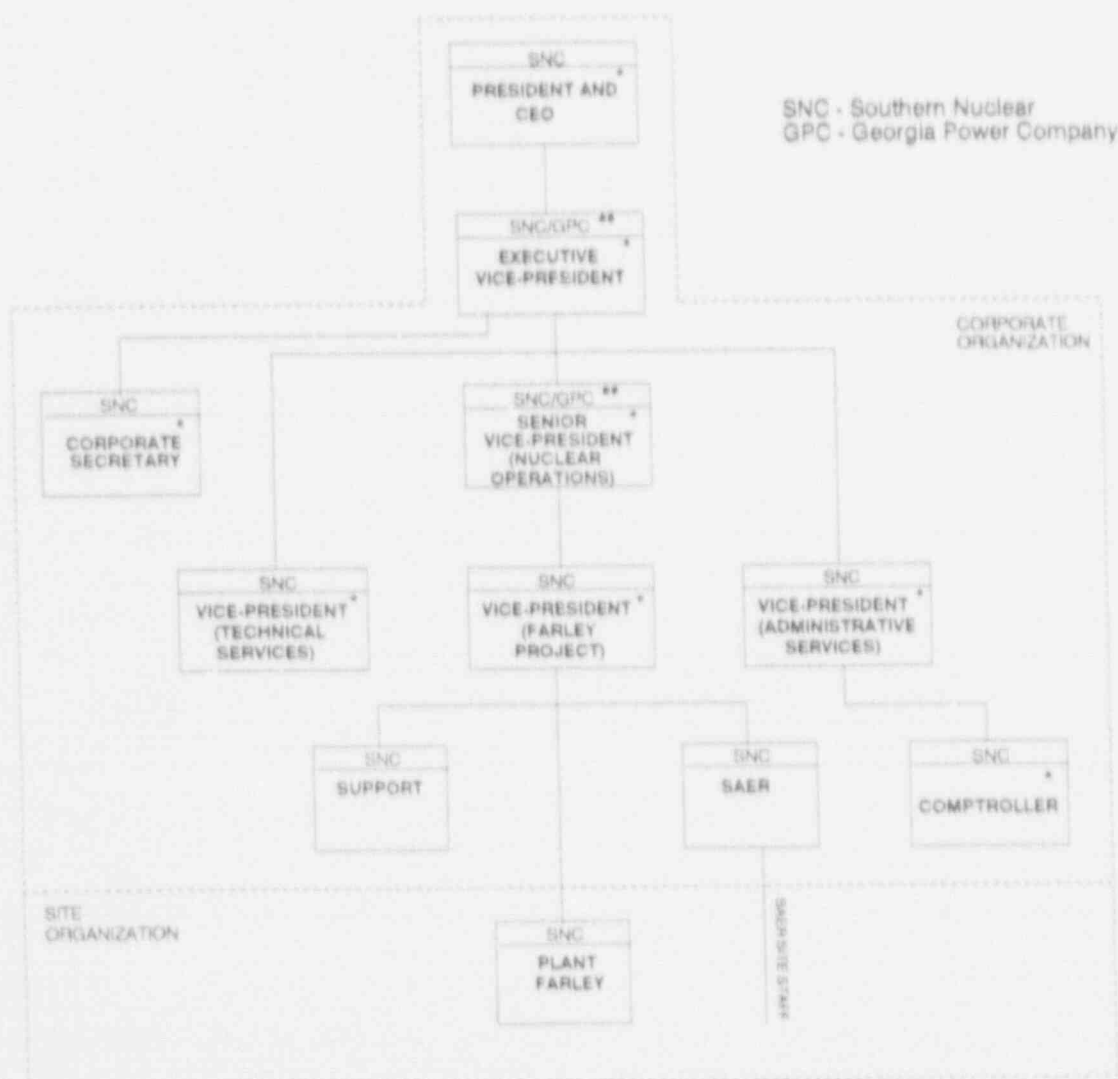
<sup>3</sup> Mr. Woodard is also currently a Vice President of Alabama Power Company.

<sup>4</sup> Mr. Beckham is also currently a Vice President of Georgia Power Company.

<sup>5</sup> Mr. McCoy is also currently a Vice President of Georgia Power Company.

consist of specialized, technical functions supporting FNP and the other nuclear plants in the Southern system. Similarly, the Administrative Services organization will be at corporate headquarters and will provide administrative support for FNP and other nuclear plants. The proposed organizational chart is as follows:

**SOUTHERN NUCLEAR ORGANIZATION**  
(With Southern Nuclear as Licensed Operator of Farley)



- \* SOUTHERN NUCLEAR COMPANY OFFICERS
- \*\* Management also responsible for Hatch and Vogtle organizations (not shown) and continue to be employees of Georgia Power Company reporting to the President and CEO of Georgia Power Company with regard to licensed activities at Georgia Power Company facilities.

(1) Technical Qualifications

The technical qualifications of Southern Nuclear to fulfill its responsibilities under the proposed amended operating licenses are consistent with the present technical qualifications of Alabama Power Company because these amendments involve no change in personnel responsibilities. On January 1, 1991, the off-site support organization for FNP became employees of Southern Nuclear. In order for Alabama Power Company to maintain its license responsibilities, certain off-site support organizational personnel also remained employees of Alabama Power Company as shared employees. Similarly, when these amendments become effective, the on-site nuclear generation organization will be transferred intact. Southern Nuclear will then employ, or contract as necessary, all of the technically qualified personnel necessary to become responsible for possession, management, operation, use and maintenance of FNP. It follows, too, that after these amendments become effective the technical qualifications of both the on-site and off-site organizations will be equivalent to those currently existing.

(2) Nuclear Operations

The Nuclear Operations organization of Southern Nuclear is based upon a project concept which provides FNP with a dedicated support organization.<sup>6</sup> Each nuclear site reports to a project Vice-President who has responsibility for that particular site.

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<sup>6</sup> If, at a later time, Southern Nuclear assumes exclusive operating responsibility for other licensed nuclear energy plants, it is anticipated that the project concept will also be used.

All essential support and oversight functions report to a Southern Nuclear Vice President, who ultimately reports to the Executive Vice President and President. These are the officers responsible for the safe, reliable, and economic operation of FNP. Several significant advantages result from the project concept:

- (1) It provides clear lines of authority and responsibility while ensuring that essential corporate support functions which are dedicated to the project report to a single responsible executive.
- (2) The effectiveness of project quality assurance is enhanced by integration with other aspects of project management under the direction of a single executive.
- (3) The project structure provides the project executive the flexibility necessary for managing his resources to achieve optimal results.
- (4) The project structure provides management of Southern Nuclear the flexibility necessary to adapt to different procedures and methods used at each nuclear plant within the Southern electric system.
- (5) The effectiveness of a dedicated corporate project support organization is enhanced by identification with and sharing of common goals and objectives.

(3) Technical Services and Administrative Services

In addition to the project support group, there are Technical Services and Administrative Services organizations. The Technical Services organization provides support in areas such as in-service inspection, nuclear fuel management, regulatory support (probabilistic risk assessment, radiological safety, generic licensing, etc.), and corporate quality services. Technical Services currently provides technical support to FNP, as well as the Hatch and Vogtle facilities operated by Georgia Power Company, in a resource-efficient manner. The Administrative Services

organization currently provides financial services; handles personnel matters, procurement services, labor relations, and employee compensation and benefits; provides corporate training; and performs other duties of an administrative nature. As with Technical Services, Administrative Services performs these duties for multiple nuclear plants in a resource-efficient manner.

E. Organization of the FNP Project

(1) On-Site Organization

After amendment of the facility operating licenses as requested in this Application, no change in the FNP on-site nuclear generation organization is anticipated except for employment by Southern Nuclear and, where appropriate, title changes reflecting the exclusive operating status of Southern Nuclear.

(2) Off-Site Organization

For off-site organizations, the proposed structure will consist of the aforementioned Farley support and quality assurance organizations. Functional areas for the Farley support group will include administrative, emergency planning, licensing, engineering, maintenance and outage support.

The Farley Manager-Safety Audit and Engineering Review (MSAER) will report to the FNP Vice President, who will be the final management authority responsible for developing, implementing, reviewing, and amending the Operations Quality Assurance Program (OQAP). The Farley MSAER will conduct periodic audits of the on-site Safety Audit and Engineering Review Supervisor and the off-site Farley support organization. The Farley MSAER will be the



secretary of the Nuclear Operations Review Board (NORB), the FNP off-site Safety Review Board. The OQAP will continue to be implemented as currently described in Chapter 17 of the FSAR.

A project-specific NORB will continue to provide independent review of appropriate activities. The NORB function, composition and requirements regarding the use of alternates and consultants, meeting frequency, quorum requirements, review responsibilities, and requirements for recordkeeping will be unchanged. Of course, appropriate title changes will be made to reflect Southern Nuclear's status as the licensed operator.

F. Benefits of Proposed Amendment

Authorizing Southern Nuclear to become the licensed operator for FNP will be a positive step toward an integrated nuclear operating company with operating responsibility for multiple nuclear energy plants. Benefits from such a multi-plant, single-focus organization include the following:

- (1) As a result of the formation of Southern Nuclear as a nuclear operating company, management is devoted to the business of nuclear power operations. Such single-purpose management will be able to pursue overall excellence in nuclear power plant operations without distractions from the requirements and duties of other areas of the electric utility business.
- (2) Southern Nuclear will be a repository of nuclear operating and management expertise and experience. Presently, there is a wealth of nuclear operations talent located in different subsidiary companies of The Southern Company. Consolidation of this talent into one nuclear operating company will have a synergistic effect. The change will enhance both public safety and economic plant operation.
- (3) Southern Nuclear will be better able to provide a consistent vision for the philosophy of operation of multiple nuclear units. This common vision will allow development of a company philosophy which can be specifically designed for nuclear

plant operations. This focused philosophy can be effectively used to achieve excellence in all aspects of nuclear operations more so than the broadly stated philosophies of the separate utilities.

- (4) As a result of the consolidation of off-site support organizations, there will be more effective communication and use of nuclear operating experience. For example, "lessons learned" by Southern Nuclear from multiple plant operations can be shared promptly, efficiently, and consistently.
- (5) Certain corporate support functions, such as administration and corporate communications functions, will become specialized and focused on the requirements of a nuclear operating company and will thereby be more effective in their support of all nuclear plants Southern Nuclear may operate.
- (6) Southern Nuclear becoming the licensed operator will lead to a broader base and more competitive environment for upper management candidates who are specialized in nuclear power generation. Furthermore, it will provide an environment in which employees will be highly motivated toward high performance. Southern Nuclear, as an NRC licensed operator, will provide greater opportunity for career progression and thus greater opportunity to retain valued employees.
- (7) More specifically, one result from amending the license as requested is that salary structures, career path policies and procedures for nuclear employees of Southern Nuclear will be separate and distinct from Alabama Power Company's non-nuclear employees. This will permit nuclear managers to focus upon the special needs, qualifications, and requirements of nuclear employees. Human resource and compensation policies tailored to nuclear operations will allow Southern Nuclear to be competitive in the market for skilled nuclear professionals without directly influencing, or being bound by, personnel policies and procedures governing non-nuclear personnel. The ability to attract superior nuclear talent and to retain quality individuals, once recruited, will have a direct and positive impact on the quality of overall nuclear plant operations.

The result sought by these license amendment requests is thus consistent with the views and perspective of the Nuclear Regulatory Commission in recent years, calling for strong and focused management of nuclear power plant operations.

G. Financial Aspects

As discussed below, Southern Nuclear will be an "electric utility" as that term is defined by 10 CFR 50.2. Therefore, under 10 CFR 50.33(f), a full financial qualifications review of this Application to amend the license is not necessary. The following brief discussion of the pertinent corporate and contractual relationships is provided:

1. Southern Nuclear will not have any ownership interest in FNP, nuclear facilities or fuel. However, pursuant to the operating agreement with Alabama Power Company, Southern Nuclear will operate the plant as the agent of Alabama Power Company, and it will have overall responsibility for plant operations, including exclusive responsibility for safety decisions. Ultimate authority of Southern Nuclear's policies will be governed by the Board of Directors of Southern Nuclear.
2. By contract, Alabama Power Company and Southern Nuclear will establish responsibility for plant costs. Those costs experienced directly by Southern Nuclear in the operation of FNP will be reimbursed by Alabama Power Company pursuant to the contract. Other expenses of Southern Nuclear which are not direct charges to FNP will be allocated to Alabama Power Company and others for whom such expenses are incurred. Responsibility for reimbursement of these costs will be absolute. Because Alabama Power Company is entitled to the entire electric generation from FNP and does not purchase electric generation from Southern Nuclear, the costs will not be "rates" subject to regulatory review and approval except, as is already the case, as items of costs to Alabama Power Company.
3. Alabama Power Company is subject to the jurisdiction of two economic regulatory authorities, the Alabama Public Service Commission and the Federal Energy Regulatory Commission, and will include the aforementioned costs as capital expenditures and expenses of power production for rate making purposes before these authorities.

4. With Southern Nuclear as the licensed plant operator, Alabama Power Company will commit to provide all funds necessary for the safe operation, construction, maintenance, repair, decontamination and decommissioning incurred or accrued by Southern Nuclear.<sup>7</sup> Because the owner and the sources of funds will remain unchanged, no limits are proposed on any operating, maintenance or decommissioning costs to be recoverable by Southern Nuclear. Thus, the contractual obligations, and retention of full ownership interest by Alabama Power Company as well as Alabama Power Company's entitlement to all electrical output from the plant, assure that the financial qualifications for FNP will remain the same as currently exist for Alabama Power Company.
5. Alabama Power Company will retain authority to direct that the plant be shut down in an orderly fashion by Southern Nuclear (and in accordance with Southern Nuclear's safety judgment) rather than make specific capital modifications or other major expenditures. This retained authority ultimately will limit Southern Nuclear's spending authority, but will not encumber Southern Nuclear's ability to make operational safety decisions and will have no impact on safe operation of the plant.

#### H. Antitrust Considerations

Alabama Power Company's plan to contract with Southern Nuclear for nuclear plant operations will not affect the existing plant ownership or entitlement to power output. Because of this fact, there can be no impact from the proposed amendments on any commercial activity that may be related to nuclear plant ownership or control. These license amendments have no significance to any activity that may give rise to antitrust concern. Further, the proposed license amendments to designate Southern Nuclear as the

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<sup>7</sup> More specifically, with regard to decommissioning funding, Alabama Power Company will remain responsible for those funds in accordance with its obligations and its certification to the NRC under 10 CFR 50.75 dated July 26, 1990.

entity authorized to operate FNP Units 1 and 2 as agent for Alabama Power Company will not alter any of the existing antitrust license conditions applicable to Alabama Power Company. Therefore, the proposed license amendments do not require antitrust review pursuant to Section 105 of the Atomic Energy Act and 10 CFR 2.101(e).

Notwithstanding this lack of applicability of the antitrust review procedure to the present Application, Alabama Power Company and Southern Nuclear agree to the addition of the following language to the antitrust conditions of each license:

Southern Nuclear shall not market or broker power or energy from Joseph M. Farley Nuclear Plant, Units 1 and 2. Alabama Power Company shall continue to be responsible for compliance with the obligations imposed on it in its antitrust license conditions in Paragraph 2.F. of the license (the "antitrust license conditions"). Alabama Power Company is responsible and accountable for the actions of its agent, Southern Nuclear, to the extent said agent's actions may, in any way, contravene the existing antitrust license conditions.

I. Restricted Data

This Application does not contain any Restricted Data or other defense information, and it is not expected that any such information will become involved in the licensed activities. However, in the event that such information does become involved, Southern Nuclear agrees that it will appropriately safeguard such information and it will not permit any individual to have access to Restricted Data until the Office of Personnel Management shall have made an investigation and report to the Nuclear Regulatory

Commission on the character, associations and loyalty of such individual, and the Nuclear Regulatory Commission shall have determined that permitting such person to have access to Restricted Data will not endanger the common defense and security.

#### IV. SPECIFIC INFORMATION REGARDING ADDITIONAL ISSUES

##### A. Emergency Planning

Upon approval of the proposed license amendments, Southern Nuclear will become responsible and have the authority for all functions necessary to fulfill the emergency planning requirements specified in 10 CFR 50.47(b) and Part 50, Appendix E. Plans and service agreements will be established to ensure that all support\* described in the existing emergency plan will be maintained.

Control over existing agreements for support from off-site organizations and agencies will be assigned or delegated by Alabama Power Company to Southern Nuclear. This will be accomplished prior to the transfer of responsibility by letter from Alabama Power Company to, or by execution of revised contracts with, each organization and agency. These changes will be effective on approval of Southern Nuclear becoming the licensed plant operator. Prior to issuing these letters, each organization and agency will be contacted either in person or by phone to ensure that there are no delays associated with the transfer.

Following the reassignment of operating responsibility to Southern Nuclear, a significant amount of off-site emergency planning support, including communication with the public, will be



provided by Alabama Power Company. These activities are being reviewed and the required support will be assured by service agreement between Southern Nuclear and Alabama Power Company, as necessary.

In sum, the proposed license amendments will not impact compliance with the emergency planning requirements. Transferring the emergency plan responsibilities to Southern Nuclear can be accomplished without decreasing the effectiveness of the plan. Because the effectiveness of the emergency plan will not be decreased, specific emergency plan and procedure changes will be submitted to the NRC within 30 days after the changes are made, pursuant to 10 CFR 50.54(q) and 10 CFR Part 50, Appendix E, Section V.

B. General Design Criterion 17

The amendments to authorize Southern Nuclear to become the licensed operator involve no changes in the ownership or design of the off-site power system for FNP, or in its operation, maintenance or testing. Upon approval of the amendments, Alabama Power Company will continue to fulfill its current responsibilities with respect to compliance with General Design Criterion (GDC) 17.

This criterion specifically requires that there be an assured source of off-site power to the plant. Pursuant to this requirement, Southern Nuclear and Alabama Power Company will maintain and implement agreements specifying: (1) the arrangements for provision of a continued source of off-site power, and (2) the arrangements, between Southern Nuclear and Alabama Power Company,



for controlling operation, maintenance, repair, and other activities with respect to the transmission lines and the switchyard, such that adequate independent sources of off-site power will continue to be provided.

In substance, the agreements will provide for the future interface between Southern Nuclear and Alabama Power Company and will provide for the continuation of current arrangements for the operation and maintenance of the switchyard and associated transmission facilities in the Exclusion Area. The agreement will also specify that Alabama Power Company will obtain approval from Southern Nuclear prior to implementing any changes in the equipment located in the Exclusion Area.

C. Exclusion Area

Upon approval of the amendments providing for Southern Nuclear to become the licensed operator, Southern Nuclear will have authority to determine all activities within the FNP Exclusion Area, to the extent required by 10 CFR Part 100.

Alabama Power Company owns the entire plant Exclusion Area in fee simple, including mineral rights. Pursuant to the operating agreement between Southern Nuclear and Alabama Power Company, Southern Nuclear will have unrestricted access to the real property constituting the Farley plant site, including the facilities, equipment, switchyard and personal property located on the site.<sup>8</sup>

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<sup>8</sup> Pursuant to the operating agreement, Southern Nuclear will also have unrestricted access to certain real property off-site, such as the environmental monitoring stations, which are necessary to support plant operations.

Also, Southern Nuclear will have authority to exercise complete control over the Exclusion Area (as designated in the FSAR) and to determine all activities within that area, including all areas of the plant and the switchyard. This authority allows Southern Nuclear to control ingress and egress and to order an evacuation if necessary. Southern Nuclear will become responsible for the emergency plan and procedures as discussed above.

D. Security

The proposed license amendments will not impact compliance with the physical security requirements of 10 CFR Part 73 as set forth in the FNP Security Plan, Contingency Plan, and Guard Training and Requalification Plan. Upon becoming the licensed operator, Southern Nuclear will become responsible for implementation of all aspects of the present security program. Control over existing agreements for support from off-site organizations and agencies will be assigned or delegated by Alabama Power Company to Southern Nuclear. This will be accomplished prior to the transfer of responsibility by letter from Alabama Power Company to, or by execution of revised contracts with, each organization or agency to be effective upon Southern Nuclear becoming the plant licensed operator. Changes to the plans to reflect this transition will not decrease the effectiveness of the plans but will be submitted to the NRC within sixty (60) days after the changes are made, in accordance with 10 CFR 50.54(p).

E. Quality Assurance Program

The proposed license amendments will not impact compliance with the quality assurance requirements of 10 CFR Part 50, Appendix B, nor will they reduce the commitments in the quality assurance program description previously accepted by the NRC for FNP. Upon Southern Nuclear becoming the licensed operator, Southern Nuclear will become responsible for present functions associated with the FNP quality assurance program. The function and structure of the FNP quality assurance organization will not be affected by these license amendments. Changes to reflect the transition, which will be handled in accordance with 10 CFR 50.54(a), will not reduce the commitments in the quality assurance program description.

F. Training

The proposed license amendments will not impact compliance with the operator re-qualification program requirements of 10 CFR 50.54 and related sections, nor maintenance of the Institute of Nuclear Power Operations accreditation for licensed and non-licensed training. Upon Southern Nuclear becoming the licensed operator, Southern Nuclear will become responsible for implementation of present training programs. Changes to the programs to reflect the transition will not decrease the scope of the approved operator re-qualification program without the specific authorization of the NRC in accordance with 10 CFR 50.54(i-1).

V. CORRESPONDENCE

On the effective date of the amendment, all NRC correspondence related to Docket Nos. 50-348 and 50-364 should be directed to Southern Nuclear as all licensee correspondence related to FNP will be transmitted by Southern Nuclear. Southern Nuclear will notify NRC in writing of any exceptions to this policy.

VI. EFFECTIVE DATE

Regulatory reviews and/or approvals in addition to that of the NRC are required before Southern Nuclear can become the licensed operator of FNP. Alabama Power Company therefore requests that the Safety Evaluation Report be issued separately from the license amendments. Alabama Power Company requests that the Safety Evaluation Report be issued by September 1, 1991. Alabama Power Company will separately notify the NRC for issuance of the license amendments at such time as all other requirements have been satisfied and Southern Nuclear is ready to become the licensed operator for the plant. It is anticipated that such notice will be given within thirty (30) days after the Safety Evaluation Report is issued.

## VII. NOTICES

Any notices, questions or correspondence in connection with this filing should be directed to:

Mr. J. D. Woodard  
Vice President-Farley Project  
Alabama Power Company  
Post Office Box 1295  
Birmingham, Alabama 35201-1295

With a copy to:

Mr. James H. Miller, III  
Balch & Bingham  
Post Office Box 306  
Birmingham, Alabama 35201

The service lists identifying required distribution of correspondence addressed to the NRC will initially remain unchanged except that the Alabama Power Company employees identified on the distribution list will be Southern Nuclear employees.

## VIII. CONCLUSION

Alabama Power Company respectfully requests that this Application for an amendment be granted. As indicated in Attachment A, Southern Nuclear concurs with and supports the filing of this Application.

AFFIRMATION

I, R. P. McDonald, being duly sworn, state that I am Executive Vice President of Alabama Power Company; that on behalf of Alabama Power Company I am authorized by Alabama Power Company to sign and file with the Nuclear Regulatory Commission, this Application for amendment of the Operating Licenses of the Farley Nuclear Plant; that I signed this Application as Executive Vice President of Alabama Power Company; and that the statements made and the matters set forth therein are true and correct to the best of my knowledge, information and belief.

ALABAMA POWER COMPANY

BY:

  
R. P. McDonald

Dated: May 6, 1991  
Birmingham, Alabama

  
NOTARY PUBLIC

MY COMMISSION EXPIRES JANUARY 12, 1993

ATTACHMENT A  
CERTIFICATE OF CONCURRENCE OF  
SOUTHERN NUCLEAR OPERATING COMPANY, INC.



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

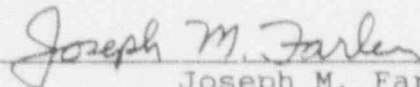
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ALABAMA POWER COMPANY	)	
	)	Docket Nos. 50-348
	)	50-364
(Joseph M. Farley Nuclear	)	
Plant, Unit Nos. 1 and 2)	)	

CERTIFICATE OF CONCURRENCE OF  
SOUTHERN NUCLEAR OPERATING COMPANY, INC.

Southern Nuclear Operating Company, Inc. (Southern Nuclear) concurs in and supports the filing of the "Application to Amend Facility Operating License Nos. NPF-2 and NPF-8" by Alabama Power Company.

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

By:



Joseph M. Farley  
President and Chief Executive Officer

ATTACHMENT B  
SIGNIFICANT HAZARDS EVALUATION

SIGNIFICANT HAZARDS CONSIDERATION EVALUATION PURSUANT TO 10 CFR 50.92

A. Proposed Change

The proposed amendments to Facility Operating License Nos. NPF-2 and NPF-8 for Units 1 and 2 of the Joseph M. Farley Nuclear Plant will result in licensing Southern Nuclear Operating Company, Inc. (Southern Nuclear) as the exclusive operating authority for this facility with responsibility for, and control over, the physical possession, operation, management, maintenance and use.

B. Background

Southern Nuclear is a wholly owned subsidiary of The Southern Company, which also owns all of the common stock of Alabama Power Company. One of the purposes for incorporating Southern Nuclear was for it to be authorized by the NRC to possess, use, operate, manage and maintain Units 1 and 2 of the Joseph M. Farley Nuclear Plant (FNP). Currently, these responsibilities are held by Alabama Power Company. Under the terms of the proposed amendments, the operating licenses will designate Southern Nuclear as the legal entity which will provide the technical and managerial resources for the continued safe operation of the facility and as the entity with exclusive responsibility and control over the physical construction, operation and maintenance of the facility. The proposed license amendments involve no change in the ownership of

the facility, no physical changes to the plant or any change to the entitlement to its power output.

All of the current license conditions will remain in effect and the Limiting Conditions for Operation, Limiting Safety System Settings, and Safety Limits specified in the Technical Specifications will remain unchanged. While the emergency plan, security plan, and plant procedures will require some administrative changes to reflect the new operating company, no changes will be made that decrease the effectiveness of these plans and procedures. Contractual agreements between Southern Nuclear and Alabama Power Company will also clearly ensure continued compliance with General Design Criterion 17. Similarly, contractual agreements will ensure that Southern Nuclear has authority to determine all activities within the exclusion area.

The technical qualifications of Southern Nuclear to carry out its responsibilities under the operating license, as amended, will be consistent with the present technical qualifications of Alabama Power Company. Since the creation of Southern Nuclear, Alabama Power Company has continued to act as the operator of FNP Units 1 and 2, utilizing the services of Southern Nuclear in accordance with the Nuclear Services Agreement executed between the parties on December 21, 1990. When the amendments become effective, the present FNP on-site nuclear generation organization and staff will be transferred intact to Southern Nuclear. The off-site nuclear generation organization of Alabama Power Company and the associated nuclear service organizations of Southern Company Services, Inc.

have already been merged to consolidate areas of expertise within Southern Nuclear. Thus, technical qualifications of the FNP project organization of Southern Nuclear will be equivalent to those of the existing organization.

Authorizing Southern Nuclear to become the licensed operator for FNP will be a positive step toward an integrated nuclear operating company with operating responsibility for multiple nuclear energy plants. Benefits from such a multi-plant, single-focus organization include the following:

- (1) As a result of the formation of Southern Nuclear as a nuclear operating company, management is devoted to the business of nuclear power operations. Such single-purpose management will be able to pursue overall excellence in nuclear power plant operations without distractions from the requirements and duties of other areas of the electric utility business.
- (2) Southern Nuclear will be a repository of nuclear operating and management expertise and experience. Presently, there is a wealth of nuclear operations talent located in different subsidiary companies of The Southern Company. Consolidation of this talent into one nuclear operating company will have a synergistic effect. The change will enhance both public safety and economic plant operation.
- (3) Southern Nuclear will be better able to provide a consistent vision for the philosophy of operation of multiple nuclear units. This common vision will allow development of a company philosophy which can be specifically designed for nuclear plant operations. This focused philosophy can be effectively used to achieve excellence in all aspects of nuclear operations more so than the broadly stated philosophies of the separate utilities.
- (4) As a result of the consolidation of off-site support organizations, there will be more effective communication and use of nuclear operating experience. For example, "lessons learned" by Southern Nuclear from multiple plant operations can be shared promptly, efficiently, and consistently.
- (5) Certain corporate support functions, such as administration and corporate communications functions, will become specialized and focused on the requirements of a nuclear

operating company and will thereby be more effective in their support of all reactors Southern Nuclear may operate.

- (6) Southern Nuclear becoming the licensed operator will lead to a broader base and more competitive environment for upper management candidates who are specialized in nuclear power generation. Furthermore, it will provide an environment in which employees will be highly motivated toward high performance. Southern Nuclear, as an NRC licensed operator, will provide greater opportunity for career progression and thus greater opportunity to retain valued employees.
- (7) More specifically, one result from amending the license as requested is that salary structures, career path policies and procedures for nuclear employees of Southern Nuclear will be separate and distinct from Alabama Power Company's non-nuclear employees. This will permit nuclear managers to focus upon the special needs, qualifications, and requirements of nuclear employees. Human resource and compensation policies tailored to nuclear operations will allow Southern Nuclear to be competitive in the market for skilled nuclear professionals without directly influencing, or being bound by, personnel policies and procedures governing non-nuclear personnel. The ability to attract superior nuclear talent and to retain quality individuals, once recruited, will have a direct and positive impact on the quality of overall nuclear plant operations.

The result sought by these license amendment requests is thus consistent with the views and perspective of the Nuclear Regulatory Commission in recent years, calling for strong and focused management of nuclear power plant operations.

#### C. Analysis

The following discussion provides a more specific analysis of the proposed amendments which addresses the three no significant hazards consideration standards delineated in 10 CFR 50.92:

1. The proposed change will not involve a significant increase in the probability or consequences of an accident previously evaluated. Southern Nuclear will employ, or contract as necessary, all technically qualified personnel necessary to become responsible for possession, management, operation, use, and maintenance at FNP. Therefore, it follows that the technical qualifications of employees of Southern Nuclear and



its contractors will be consistent with those of Alabama Power Company presently. Personnel qualifications will remain the same as those discussed in the Technical Specifications and the FSAR.

The Alabama Power Company employees engaged in the operation of the plant will be reassigned to Southern Nuclear. The organizational structure of Southern Nuclear will provide for clear management control and effective lines of authority and communication between the organizational units involved in the management, operation, and technical support for the operation of the facility.

As a result of the proposed changes, there also will be no physical changes to the facility and all Limiting Conditions for Operation, Limiting Safety System Settings, and Safety Limits specified in the Technical Specifications will remain unchanged. With the exception of administrative changes to reflect the organization of Southern Nuclear, the emergency plan, security plan, QA program and training program will be unaffected. Provisions will also be made for an orderly transfer of emergency preparedness and security support agreements. Contractual agreements will ensure continued compliance with General Design Criteria 17 as well as Southern Nuclear control over all activities within the exclusion area.

Therefore, the proposed change will not significantly increase the probability or consequences of an accident previously evaluated. In fact, due to the opportunity for increased management focus on nuclear operations afforded by this proposed amendment, the amendment will actually enhance public safety.

2. The proposed change will not create the possibility of a new or different kind of accident from any accident previously evaluated. The design and design bases of the plant remain the same. Therefore, the current plant safety analysis remains complete and accurate in addressing the licensing basis events and analyzing plant response and consequences.

The Limiting Conditions for Operation, Limiting Safety System Settings, and Safety Limits are not affected by the proposed change. With the exception of administrative changes to reflect the organization of Southern Nuclear, plant operating and emergency procedures are unaffected. As such, the plant conditions for which the design basis accident analyses have been performed are still valid. Therefore, the proposed change will not create the possibility of a new or different kind of accident than those previously evaluated.



3. The proposed change will not involve a significant reduction in a margin of safety. Since there will be no change to the physical design or operation of the plant, there will be no change to any margins. Further, the only changes to the Technical Specifications which have been proposed are to reflect the organization of Southern Nuclear. The proposed amendment therefore will not involve a significant reduction in a margin of safety.

D. Conclusion

Based upon the analysis provided herein, the proposed amendments will not involve a significant increase in the probability or consequences of an accident previously evaluated, create the possibility of a new or different kind of accident from any accident previously evaluated, or involve a significant reduction in a margin of safety. Therefore, the proposed amendments meet the requirements of 10 CFR 50.92(c) and do not involve a significant hazards consideration.

ATTACHMENT C  
CHANGES TO OPERATING LICENSES  
(INCLUDING TECHNICAL SPECIFICATIONS AND ENVIRONMENTAL PROTECTION PLAN)

Attachment C  
Description of Changes to the Operating Licenses

This section provides a general description of the changes to the operating licenses being proposed. Immediately following this description the proposed revisions to the operating licenses, including Appendices A and B, are provided.

OPERATING LICENSE

The current operating licenses were first compiled by consolidating the past amendments into one document. Items specifically deleted by past amendments were deleted from the consolidated operating licenses and the phrase "Deleted per Amendment xx" was used to identify that a deletion had occurred. An example of such an item is license condition 2.C.(3)(b) which was deleted from Operating License NPF-2 by Amendment 13. In addition, amendment bars and the latest amendment number were used in the right hand margin of the consolidated operating licenses to identify the last amendment changing that section.

After the consolidated licenses were completed, the proposed operating licenses were created using the following criteria:

1. Southern Nuclear will be the operator and have exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.
2. Alabama Power Company will be the sole owner of the facility.
3. Southern Nuclear will not market or broker power or energy from Joseph M. Farley Nuclear Plant, Units 1 and 2.
4. Many license conditions required certain information be supplied to the NRC or certain activities be performed within certain time frames. Where license conditions were historical only and were required to be implemented during the time interval that Alabama Power Company was authorized to possess, use, and operate the facility, Alabama Power Company was used to identify the responsible party for that activity.
5. Whereas the term "licensees" was used to identify license conditions applicable to both Alabama Power Company and Southern Nuclear, the term "licensee" was used in all cases (including Appendices A and B to the Operating Licenses) to identify license conditions applicable to Southern Nuclear only.
6. Because Alabama Power will continue to be sole owner of the assets, the financial provisions of 10 CFR 140 apply only to Alabama Power Company.

7. In some cases, a license condition was effective for only a limited period of time from the original issuance of the license. In those cases where there might be confusion as to whether the condition is effective with this amendment, the word "original" was added before issuance. An example of this can be found in Operating License NPF-8, license condition 2.C.(8).

In addition, it was noted that there were several NRC Orders which amended the operating licenses. However, specific references to the portion of the operating license which was amended was not identified. Alabama Power Company has elected to create a new section of the license which identifies those NRC Orders which have been issued to specifically amend the operating licenses.

#### TECHNICAL SPECIFICATIONS (APPENDIX A TO THE OPERATING LICENSES)

Section 6.5.2.8 of the Joseph M. Farley Nuclear Plant Units 1 and 2 Technical Specifications reference the present requirements of audits performed to be under the direction of "APCO's" (Alabama Power Company's) Manager - Safety Audit and Engineering Review. With Southern Nuclear becoming the licensed operator, this individual would now be a Southern Nuclear employee. It is therefore requested that "APCO's" be deleted from the Technical Specifications to transition this responsibility into Southern Nuclear. The Manager - Safety Audit and Engineering Review will continue to report to the Farley Nuclear Plant Vice President.

#### ENVIRONMENTAL PROTECTION PLAN (APPENDIX B TO THE OPERATING LICENSES)

When Southern Nuclear becomes the Joseph M. Farley Nuclear Plant Units 1 and 2 licensed operator, Southern Nuclear also will become responsible for compliance with the Environmental Protection Plans (EPPs) and will enter into the necessary contractual arrangements to accomplish this task. If transfer of the NPDES Permit becomes necessary or desirable, then the NRC will be so notified when the transfer request is submitted to the Alabama Department of Environmental Management.

Changes are being recommended to the EPPs for Joseph M. Farley Nuclear Plant Units 1 and 2 as follows:

1. Since Southern Nuclear will become responsible for compliance with the EPP of each unit, the cover sheet should be changed accordingly.

2. Changes to pages 1-1, 3-3, and 5-1 are proposed to allow the NPDES Permit to be assigned to Southern Nuclear, if necessary or desirable.
3. Section 4.2.2 titled "Herbicide Application" specifies that only approved herbicides be used on specific transmission line rights-of-way and that records be maintained concerning herbicide use. Southern Nuclear shall become responsible for this obligation being maintained with NRC's approval of Southern Nuclear being the licensed operator of the plant. A final decision has not yet been made concerning the future physical location of the subject herbicide records. Therefore, it is requested that the wording of this section be revised to reflect only the requirement that records be maintained.

OPERATING LICENSE CHANGES  
(EXCLUDING APPENDICES A AND B)  
NPF-2



SOUTHERN NUCLEAR OPERATING COMPANY

ALABAMA POWER COMPANY

DOCKET NO. 50-348

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 1

FACILITY OPERATING LICENSE

License No. NPF-2

1. The Nuclear Regulatory Commission (the Commission) having found that:
  - A. The application for license filed by Southern Nuclear Operating Company (herein called Southern Nuclear) and Alabama Power Company (the licensees) 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 and all required notifications to other agencies or bodies have been duly made;
  - B. Construction of the Joseph M. Farley Nuclear Plant, Unit 1 (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-85 and the application, as amended, the provisions of the Act and the rules and regulations of the Commission;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
  - D. There is reasonable assurance: (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;

\* Southern Nuclear succeeds Alabama Power Company as the operator of Joseph M. Farley Nuclear Plant, Unit 1. Consequently, Southern Nuclear is authorized to act as agent for Alabama Power Company and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility. Hereinafter, the term "licensees" refers to both Southern Nuclear and Alabama Power Company.



- E. Southern Nuclear is technically qualified and the licensees are financially qualified to engage in the activities authorized by this operating license in accordance with the rules and regulations of the Commission;
  - F. Alabama Power Company has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
  - G. The issuance of this operating license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Facility Operating License No. NPF-2 subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 51 (formerly Appendix D to 10 CFR Part 50), of the Commission's regulations and all applicable requirements have been satisfied; and
  - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Part 30, 40 and 70, including 10 CFR Sections 30.33, 40.32, 70.23 and 70.31.
2. Facility Operating License No. NPF-2 is hereby issued to the licensees to read as follows:
- A. This license applies to the Joseph M. Farley Nuclear Plant, Unit 1, a pressurized water nuclear reactor and associated equipment (the facility), owned by the Alabama Power Company and operated by Southern Nuclear. The facility is located on the Chattahoochee River in Houston County near the city of Dothan, Alabama and is described in the "Final Safety Analysis Report" as supplemented and amended (Amendments 26 through 66) and the Environmental Report as supplemented and amended (Amendments 1 through 6).
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
    - (1) Southern Nuclear, pursuant to Section 103 of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, manage, use, maintain, and operate the facility at the designated location in Houston County, Alabama in accordance with the procedures and limitations set forth in this license;

- (2) Alabama Power Company, pursuant to Section 103 of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess but not operate the facility at the designated location in Houston County, Alabama in accordance with the procedures and limitations set forth in this license.
- (3) Southern Nuclear, pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
- (4) Southern Nuclear, pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) Southern Nuclear, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (6) Southern Nuclear, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee\* is authorized to operate the facility at steady state reactor core power levels not in excess of 2652 megawatts (thermal). Prior to attaining the power level, Alabama Power Company\*\* shall complete the preoperational tests, startup tests and other items identified in Attachment 2 to this license in the sequence specified. Attachment 2 is an integral part of this license.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 88, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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(3) Additional Conditions

The matters specified in the following conditions shall be completed to the satisfaction of the Commission within the stated time periods following the issuance of the license or within the operational restrictions indicated. The removal of these conditions shall be made by an amendment to the license supported by a favorable evaluation by the Commission.

- (a) Southern Nuclear shall not operate the reactor in Operational Modes 1 and 2 with less than three reactor coolant pumps in operation.
- (b) Deleted per Amendment 13
- (c) Deleted per Amendment 2
- (d) Deleted per Amendment 2

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\* The term "licensee" (singular) shall refer to Southern Nuclear.

\*\* The original licensee authorized to possess, use, and operate the facility was Alabama Power Company. Consequently, certain historical references to Alabama Power Company remain in the license conditions.

- (e) Prior to startup following the first regularly scheduled refueling outage, Alabama Power Company shall replace instrumentation for measurement of the pressurizer level, the steam generator wide range level, the steam generator narrow range level, and the reactor coolant system pressure with the corresponding modified instrumentation identified in Amendment Number 65 to the Final Safety Analysis Report.

Deleted per Amendment 2

- (f) Southern Nuclear shall not use the spent fuel cask crane for the purpose of moving spent fuel casks prior to submission to and approval by the Commission of the design of the lifting devices which attach the spent fuel cask to the crane.
- (g) Southern Nuclear shall maintain a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:
1. Identification of a sampling schedule for the critical parameters and control points for these parameters;
  2. Identification of the procedures used to quantify parameters that are critical to control points;
  3. Identification of process sampling points;
  4. Procedure for the recording and management of data;
  5. Procedure defining corrective actions for off control point chemistry conditions; and
  6. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events required to initiate corrective action.

(4) Fire Protection Program

Southern Nuclear shall maintain in effect and fully implement all provisions of the approved fire protection plan. The approved fire protection plan consists of the document entitled, "Farley Nuclear Plant Fire Protection Program Reevaluation" which includes:

Initial Issue, submitted with letter dated September 15, 1977;

Amendment 1, submitted with letter dated February 23, 1978;

Amendment 2, submitted with letter dated July 14, 1978;

Amendment 3, submitted with letter dated October 27, 1978;

Amendment 4, submitted with letter dated January 3, 1979.

Alabama Power Company may proceed with and is required to complete the modifications identified in Tables 1, 2 and 3 of the NRC's Joseph M. Farley Safety Evaluation Report, Fire Protection Review, Unit Nos. 1 and 2 dated February 12, 1979. Most of the modifications will be completed before the end of the second refueling outage for Unit No. 1. Exceptions are smoke detectors, penetration seals and barriers which will be completed by September 1, 1980. In the event that these modifications cannot be completed as identified in Tables 1, 2 and 3, Alabama Power Company shall submit a report, explaining the circumstances, together with a revised schedule for NRC approval.

Administrative control changes and procedure revisions shall be implemented as described in NRC's Safety Evaluation Report dated February 12, 1979.

Further, by January 1, 1980, Alabama Power Company shall provide for Commission review and obtain Commission approval of the final design of the modifications prior to implementation which would allow the reactor to be taken to cold shutdown without reliance on the cable spreading room, or the control room.

The fire protection program modifications are described in the Commission approved Farley Nuclear Plant Fire Protection Program. Southern Nuclear is authorized to make other changes to the program without prior Commission approval provided that such changes do not result in a decrease in the effectiveness of the program.

- D. The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90

and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Joseph M. Farley Nuclear Plant Physical Security Plan," with revisions submitted through November 17, 1987; "Joseph M. Farley Nuclear Plant Guard Training and Qualification Plan," with revisions submitted through April 12, 1982; and "Joseph M. Farley Nuclear Plant Safeguards Contingency Plan," with revisions submitted through March 28, 1980. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

- E. This license is subject to the following additional conditions for the protection of the environment:
- (1) The licensee shall operate the facility within applicable Federal and State air and water quality standards and the Environmental Technical Specifications which include nonradiological and radiological monitoring programs, limits on effluent releases, and appropriate comprehensive ecological surveillance study, and reporting requirements.
  - (2) Before engaging in an operational activity not evaluated by the Commission, the licensee will prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity may result in a significant adverse environmental impact that was not evaluated, or that is significantly greater than evaluated in the Final Environmental Statement, the licensee shall provide a written evaluation of such activities and obtain prior approval of the Director, Office of Nuclear Reactor Regulation for the activities.
- F. Alabama Power Company shall meet the following antitrust conditions:
- (1) Alabama Power Company shall recognize and accord to Alabama Electric Cooperative (AEC) the status of a competing electric utility in central and southern Alabama.
  - (2) Alabama Power Company shall offer to sell to AEC an undivided ownership interest in Units 1 and 2 of the Farley Nuclear Plant. The percentage of ownership interest to be so offered shall be an amount based on the relative sizes of the respective peak loads of AEC and the Alabama Power Company (excluding from the Alabama Power Company's peak load that amount imposed by members of AEC upon the electric system of Alabama Power Company) occurring in 1976. The price to be paid by AEC for



its proportionate share of Units 1 and 2, determined in accordance with the foregoing formula, will be established by the parties through good faith negotiations. The price shall be sufficient to fairly reimburse Alabama Power Company for the proportionate share of its total costs related to the Units 1 and 2 including, but not limited to, all costs of construction, installation, ownership and licensing, as of a date, to be agreed to by the two parties, which fairly accommodates both their respective interests. The offer by Alabama Power Company to sell an undivided ownership interest in Units 1 and 2 may be conditioned, at Alabama Power Company's option, on the agreement by AEC to waive any right of partition of the Farley Plant and to avoid interference in the day-to-day operation of the plant.

- (3) Alabama Power Company will provide, under contractual arrangements between Alabama Power Company and AEC, transmission services via its electric system (a) from AEC's electric system to AEC's off-system members; and (b) to AEC's electric system from electric systems other than Alabama Power Company's and from AEC's electric system to electric systems other than Alabama Power Company's. The contractual arrangements covering such transmission services shall embrace rates and charges reflecting conventional accounting and ratemaking concepts followed by the Federal Energy Regulatory Commission (or its successor in function) in testing the reasonableness of rates and charges for transmission services. Such contractual arrangements shall contain provisions protecting Alabama Power Company against economic detriment resulting from transmission line or transmission losses associated therewith.
- (4) Alabama Power Company shall furnish such other bulk power supply services as are reasonably available from its system.
- (5) Alabama Power Company shall enter into appropriate contractual arrangements amending the 1972 Interconnection Agreement as last amended to provide for a reserve sharing arrangement between Alabama Power Company and AEC under which Alabama Power Company will provide reserve generating capacity in accordance with practices applicable to its responsibility to the operating companies of the Southern Company System. AEC shall maintain a minimum level expressed as a percentage of coincident peak one-hour kilowatt load equal to the percent reserve level similarly expressed for



Alabama Power Company as determined by the Southern Company System under its minimum reserve criterion then in effect. Alabama Power Company shall provide to AEC such data as needed from time to time to demonstrate the basis for the need for such minimum reserve level.

- (6) Alabama Power Company shall refrain from taking any steps, including but not limited to the adoption of restrictive provisions in rate filings or negotiated contracts for the sale of wholesale power, that serve to prevent any entity or group of entities engaged in the retail sale of firm electric power from fulfilling all or part of their bulk power requirements through self-generation or through purchases from some other source other than Alabama Power Company. Alabama Power Company shall further, upon request and subject to reasonable terms and conditions, sell partial requirements power to any such entity. Nothing in this paragraph shall be construed as preventing applicant from taking reasonable steps, in accord with general practice in the industry, to ensure that the reliability of its system is not endangered by any action called for herein.

- (7) Alabama Power Company shall engage in wheeling for and at the request of any municipally-owned distribution system:

- (1) of electric energy from delivery points of Alabama Power Company to said distribution system(s); and
- (2) of power generated by or available to a distribution system as a result of its ownership or entitlement\* in generating facilities, to delivery points of Alabama Power Company designated by the distribution system.

Such wheeling services shall be available with respect to any unused capacity on the transmission lines of Alabama Power Company, the use of which will not jeopardize Alabama Power Company's system. The contractual arrangements covering such wheeling services shall be determined in accordance with the principles set forth in Condition (3) herein.

\* "Entitlement" includes but is not limited to power made available to an entity pursuant to an exchange agreement.

Alabama Power Company shall make reasonable provisions for disclosed transmission requirements of any distribution system(s) in planning future transmission. By "disclosed" is meant the giving of reasonable advance notification of future requirements by said distribution system(s) utilizing wheeling services to be made available by Alabama Power Company.

- (8) The foregoing conditions shall be implemented in a manner consistent with the provisions of the Federal Power Act and the Alabama Public Utility laws and regulations thereunder and all rates, charges, services or practices in connection therewith are to be subject to the approval of regulatory agencies having jurisdiction over them.

Southern Nuclear shall not market or broker power or energy from Joseph M. Farley Nuclear Plant, Units 1 and 2. Alabama Power Company shall continue to be responsible for compliance with the obligations imposed on it by the antitrust conditions contained in this paragraph 2.F. of the license. Alabama Power Company shall be responsible and accountable for the actions of its agent, Southern Nuclear, to the extent said agent's actions may, in any way, contravene the antitrust conditions of this paragraph 2.F.

- G. In accordance with the requirement imposed by the October 8, 1976 order of the United States Court of Appeals for the District of Columbia Circuit in Natural Resources Defense Council v. Nuclear Regulatory Commission, No. 74-1385 and 74-1586, that the Nuclear Regulatory Commission "shall make any licenses granted between July 21, 1976 and such time when the mandate is issued subject to the outcome of such proceeding herein," this license shall be subject to the outcome of such proceedings.

- H. The following Orders\* are incorporated into this license by reference:

- (1) "Environmental Qualification of Electrical Equipment," dated August 29, 1980.

\* Prior to Southern Nuclear being authorized to operate Joseph M. Farley Nuclear Plant, Unit 1, the term "licensee" referred to Alabama Power Company. Hence, the term "licensee" applies to Alabama Power Company for those orders which were fully complied with by Alabama Power Company prior to Southern Nuclear being added to the operating license.

- (2) "Order for Modification of License Concerning Primary Coolant System Pressure Isolation Valves," dated April 20, 1981.
  - (3) "Order Modifying License Confirming Additional Licensee Commitments on Emergency Response Capability (Supplement 1 to NUREG-0737)," dated July 27, 1985.
1. This license is effective as of the date of issuance and shall expire at midnight, June 25, 2017.



## ATTACHMENT 2 TO LICENSE NPF-2

### Preoperational Tests, Startup Tests, and Other Items Which Must be Completed Prior to Proceeding to Succeeding Operational Modes

This attachment identifies certain preoperational tests, startup tests, and other items which must be completed to the Commission's satisfaction prior to proceeding to certain specified Operational Modes. Alabama Power Company shall not proceed beyond the authorized Operational Modes without prior written authorization from the Commission.

- A. Alabama Power Company may at the license issue date proceed directly to Operational Mode 6 (initial fuel loading), and may subsequently proceed to Operational Mode 2 (startup), except as noted below.
- B. The following items must be completed prior to proceeding to Operational Mode 2 (startup):
  - 1. Satisfactory completion of the following tests:
    - a. 032-5-002 Heating and Ventilation (Radiation Areas)
    - b. 036-5-005 Turbine Driven Auxiliary Feedwater Pump
    - c. 037-4-005 Demineralizer Water System
    - d. 044-4-003 Condensate Systems
    - e. 045-5-003 Feedwater System
    - f. 052-5-012 Boron Injection System - Trace Heating
    - g. 060-5-008 Containment Purge and Exhaust
    - h. 061-5-005 Spray Additive Tank Flow Rate Verification
    - i. 063-5-005 Steam Generator Blowdown
    - j. 066-5-002 Reactor Cavity Cooling
    - k. 068-5-003 Solid Radioactive Waste System
    - l. 068-5-004 Drumming Station Heat Tracing
    - m. 069-5-023 Waste Evaporator
    - n. 069-5-026 Floor Drain Tank
    - o. 072-5-004 Gaseous Radioactive Waste
    - p. 094-4-003 Secondary System Chemical Addition System
    - q. 100-5-010 Pre-Critical Heatup Thermal Expansion
  - 2. Completion of modification of sample sink exhaust ventilation in the Auxiliary Building Sample Room.

3. Completion of installation of single point recorders for the six effluent radiation monitors.
4. Completion of installation of integrator and recorder for liquid effluent line and installation of integrator for dilution water line.
5. Completion of installation of flow rate measuring, recording and integrating instrumentation for the plant vent.
6. Resolution of the measures and modifications required to ensure the successful operation of the ITT Grinnel Hydraulic Shock Suppressors.

OPERATING LICENSE CHANGES  
(EXCLUDING APPENDICES A AND B)  
NPF-8

SOUTHERN NUCLEAR OPERATING COMPANY

ALABAMA POWER COMPANY

DOCKET NO. 50-364

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 2

FACILITY OPERATING LICENSE

License No. NPF-8

1. The Nuclear Regulatory Commission (the Commission or the NRC) having found that:
  - A. The application for licenses filed by Southern Nuclear Operating Company (herein called Southern Nuclear) and the Alabama Power Company (the licensees) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter 1, and all required notifications to other agencies or bodies have been duly made;
  - B. Construction of the Joseph M. Farley Nuclear Plant, Unit 2 (the facility), has been substantially completed in conformity with Construction Permit No. CPPR-86 and the application, as amended, the provisions of the Act and the regulations of the Commission;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;
  - D. There is reasonable assurance: (i) that the activities authorized by this license 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 set forth in 10 CFR Chapter I;

Southern Nuclear succeeds Alabama Power Company as the operator of Joseph M. Farley Nuclear Plant, Unit 2. Consequently, Southern Nuclear is authorized to act as agent for Alabama Power Company and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility. Hereinafter, the term "licensees" refers to both Southern Nuclear and Alabama Power Company.



- E. Southern Nuclear is technically qualified and the licensees are financially qualified to engage in the activities authorized by this license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
  - F. The Alabama Power Company has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements", of the Commission's regulations;
  - G. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Facility Operating License No. NPF-8, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan which is Appendix B to this license, is in accordance with 10 CFR Part 50, Appendix D, of the Commission's regulations and all applicable requirements have been satisfied; and
  - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.
2. Pursuant to approval by the Nuclear Regulatory Commission at a meeting on March 11, 1981, the License for Fuel Loading and Low Power Testing (NPF-8), issued on October 23, 1980, as amended, is superseded by Facility Operating License NPF-8 which is hereby issued to the licensees to read as follows:
- A. This license applies to the Joseph M. Farley Nuclear Plant, Unit 2, a pressurized water nuclear reactor and associated equipment (the facility), owned by the Alabama Power Company and operated by Southern Nuclear. The facility is located in Houston County, Alabama, and is described in the Final Safety Analysis Report," as supplemented and amended, and in the Environmental Report, as supplemented and amended.

B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

- (1) Southern Nuclear, pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, manage, use, maintain, and operate the facility at the designated location in Houston County, Alabama, in accordance with the limitations set forth in this license;
- (2) Alabama Power Company, pursuant to Section 103 of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess but not operate the facility at the designated location in Houston County, Alabama in accordance with the procedures and limitations set forth in this license.
- (3) Southern Nuclear, pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
- (4) Southern Nuclear, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) Southern Nuclear, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (6) Southern Nuclear, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

Southern Nuclear is authorized to operate the facility at reactor core power levels not in excess of 2652 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 82, are hereby incorporated in the license. The licensee\* shall operate the facility in accordance with the Technical Specifications.

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(3) Initial Test Program

Alabama Power Company\*\* shall conduct the initial test program (set forth in Section 14 of the licensee's Final Safety Analysis Report as amended) without making any modifications to this program unless such modifications are in accordance with the provisions of 10 CFR Section 50.59. In addition, Alabama Power Company shall not make any major modifications to this program unless the modifications have been identified and have received prior NRC approval. Major modifications are defined as:

- a. Elimination of any test identified as essential in Section 14 of the Final Safety Analysis Report, as amended;
- b. Modification of test objectives, methods or acceptance criteria for any test identified as essential in Section 14 of the Final Safety Analysis Report as amended;
- c. Performance of any test at a power level different from the level in the described program; or
- d. Failure to complete any tests included in the described program (planned or scheduled) for power level up to the authorized power level.

- (4) The licensee shall not use the spent fuel cask crane for the purpose of moving spent fuel casks prior to approval by the NRC of the lifting devices which attach the spent fuel cask to the crane.

\* The term "licensee" shall refer to Southern Nuclear.

\*\* The original licensee authorized to possess, use, and operate the facility was Alabama Power Company. Consequently, certain historical references to Alabama Power Company remain in the license conditions.

- (5) The interval for testing pumps and valves in accordance with 10 CFR 50.55 a(g)(2) is 120 months commencing with the start of commercial operation. Alabama Power Company shall provide additional information needed by the NRC to complete its detailed review of the Alabama Power Company's inservice testing program for pumps and valves no later than 6 months prior to the end of the first 120-month interval.

(6) Fire Protection Program

Southern Nuclear shall maintain in effect and fully implement all provisions of the approved fire protection plan except as modified by the NRC's Joseph M. Farley Safety Evaluation Report, Fire Protection Review, Units 1 and 2, transmitted to Alabama Power Company on April 13, 1979 (Fire Protection SER). The approved fire protection plan consists of the document entitled "Farley Nuclear Plant Fire Protection Program Reevaluation" which includes:

Initial Issue, submitted with letter dated September 15, 1977;

Amendment 1, submitted with letter dated February 23, 1978;

Amendment 2, submitted with letter dated July 14, 1978;

Amendment 3, submitted with letter dated October 27, 1978;

Amendment 4, submitted with letter dated January 3, 1979, and amended by letter dated October 21, 1980.

Administrative control changes and procedure revisions shall be implemented and maintained in effect as described in NRC's Fire Protection SER.

Southern Nuclear shall comply with the fire protection program set forth in Appendix R to 10 CFR Part 50 in accordance with the requirements of §50.48 of 10 CFR Part 50.

- (7) No later than 90 days from the date of original issuance of this license, Alabama Power Company shall report to the NRC the status of any items related to emergency preparedness identified by FEMA in its plan, evaluation, and exercise critique, or by the NRC in its SER and Supplements as requiring further action.

Alabama Power Company shall complete its plans for prompt notification, staffing for emergencies, upgrading the meteorological program, and upgrading emergency support facilities on the NRC approved schedule identified in the following sections of SER Supplement 5:

Section 22.5, Dated Requirements:

- Item III.A.1.1 Upgrade Emergency Support Facilities
- Item III.A.2 Long Term Emergency Preparedness

Appendix B Emergency Preparedness Evaluation Report:

- Section B Onsite Emergency Organization
- Section E Notification Methods and Procedures

- (8) On a one-time only basis, The Action Statement of Technical Specification 3.7.4. shall be replaced by the following:

Action:

With only one service water loop OPERABLE, restore at least two loops to OPERABLE status within 72\* hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

\*This 72-hour limit is extended on a one-time only basis to a maximum of 10 days for the recirculation portion of each service water loop to permit system modifications. Modifications, affecting operability, shall be made on only one of the two service water loops at a time. One loop shall remain OPERABLE until the other loop has been modified and returned to OPERABLE status. All other portions of the service water system are not covered by this one-time only change. All modifications to both loops are scheduled for completion by May 15, 1981.

For record purposes, this license condition expires 90 days from date of original license issuance.

- (9) (a) Prior to exceeding 5 percent power, Alabama Power Company shall provide to the NRC the results of the following seven augmented low power tests:
- natural circulation
  - natural circulation with simulated loss of offsite power


- natural circulation with loss of pressurized heaters
- effect of steam generator secondary side isolation on natural circulation
- natural circulation at reduced pressure
- cooldown capability of the charging and let down system
- simulated loss of all onsite and offsite ac power

(b) After operation for 25,000 MW(e) days and at its next shutdown of sufficient time duration but in any case no later than prior to the startup following the first refueling outage, results of a test of natural circulation cooldown with boron mixing shall be submitted to the NRC. However, this license condition may be satisfied in the same time frame by the Alabama Power Company's providing analyses to show that test results of such test performance at other plants are applicable to Farley 2.



- (10) Prior to exceeding 5 percent power, Alabama Power Company shall make fully operational the post-accident sampling system.
- (11) Prior to exceeding 5 percent power, Alabama Power Company shall complete the training for mitigating core damage.
- (12) Alabama Power Company shall modify procedures and, if necessary, equipment used for natural circulation cooldown as follows:
  - (a) Prior to exceeding 5 percent power, Alabama Power Company shall perform tests to demonstrate manual operation of an atmospheric steam dump valve.
  - (b) Prior to startup following the first refueling, Alabama Power Company shall make provisions (or modifications) as necessary to assure that the safety grade backup means of reactor coolant system depressurization is in accordance with the requirements of Table 1 in Branch Technical Position RSB 5-1, Rev. 1.
  - (c) Prior to startup following the first refueling, Alabama Power Company shall provide to the NRC natural circulation cooldown procedures, based on reactor natural circulation cooldown test results applicable to Farley Unit 2.



- (13) Prior to exceeding 5 percent power, Alabama Power Company shall (a) modify and test reset circuits for the containment air mixing fans, containment purge isolation valves, and auxiliary feedwater pump discharge valves to meet the requirements of IE Bulletin 80-06 "Engineered Safety Feature Reset Controls", and (b) revise procedures to be consistent with the modified designs required by (a).
- (14) Prior to exceeding 5 percent power, the following equipment which was not required to be operable by the Fuel Loading and Low Power Testing License is exempt from the Technical Specification (TS) that requires a demonstration of operability:
- All fire detectors listed in TS Table 3.3-12 except those in containment (Fire Zone 55)
  - Reactor coolant system isolation valves listed in TS Table 3.4-1.
- (15) Prior to May 31, 1981, Alabama Power Company shall complete modifications to the subcooling monitor system identified in Item II.F.2, Section 22.3 in SER Supplement 5, NUREG-0117.
- (16) Prior to startup following the second refueling, Alabama Power Company shall complete modifications for Masonry Wall 2 CBW-34 to meet the NRC staff criteria. 
- (17) Prior to October 1, 1981, Alabama Power Company shall submit to the NRC the design of a modified containment vent and purge system to reduce the use of the 18-inch purge valves during power operation. Prior to startup following the first refueling, Alabama Power Company shall install the modified system.
- (18) Alabama Power Company shall take the following remedial actions, or alternative actions, acceptable to the NRC, with regard to the environmental qualification requirements for Class IE equipment:
- (a) Complete and auditable records shall be available and maintained at a central location which describe the environmental qualification method used for all safety-related electrical equipment in sufficient detail to document the degree of compliance with NUREG-0588, "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment," dated December 1979. Such records shall be updated and maintained current as equipment is



replaced, further tested, or otherwise further qualified to document complete compliance no later than June 30, 1982.

- (b) Within 90 days of receipt of the equipment qualification safety evaluation (Appendix B to SER Supplement 6, NUREG-0117), Alabama Power Company shall either (i) provide missing documentation identified in Sections 3.0, 4.2 and 4.3 of the equipment qualification safety evaluation which will demonstrate compliance of the applicable equipment with NUREG-0588, or (ii) commit to corrective actions which will result in documentation of compliance of applicable equipment with NUREG-0588 no later than June 30, 1982.
  - (c) No later than June 30, 1982, all safety-related electrical equipment in the facility shall be qualified in accordance with the provisions of NUREG-0588.
- (19) Prior to resuming power operation following the first refueling, Alabama Power Company shall:
- (a) Provide additional evaluations of the Westinghouse fuel performance code (PAD 3.3) to demonstrate its applicability to fuel burnups during successive fuel cycles.
  - (b) Complete the remaining modifications to the primary and backup circuit protection devices in the containment penetration circuits (which are not completed during the first refueling outage) during the next extended cold shutdown after the first refueling outage, but no later than during the second refueling outage.
  - (c) Modify the lubrication system of the two Fairbanks-Morse opposed-piston diesel generators by installing a pre-lube pump arranged for automatic and manual start and powered from a reliable DC power supply or install an equivalent or better system which will prevent dry starting of the diesel generators on an automatic start signal. Alabama Power Company shall submit the system final design and implementation schedule to the NRC within six months after this license is issued.
  - (d) Inspect the main steam turbine for indications of low pressure rotor disc cracking, or replace the present low pressure rotors with refurbished rotors.

(20) Prior to April 30, 1981, Alabama Power Company shall provide a schedule to the NRC for bringing the facility into compliance with Revision 2 of Regulatory Guide 1.97, "Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," dated December 1980.

(21) Alabama Power Company shall complete each of the following conditions to the satisfaction of the NRC by the times indicated. Each of the following conditions references the appropriate item in Section 22.5, "Dated Requirements" in SER Supplement 5, NUREG-0117:

(a) Guidance for the Evaluation and Development of Procedures for Transients and Accidents (I.C.1)

Prior to startup following the first refueling after January 1, 1982, complete the upgrading of emergency procedures and associated operator training.

(b) Reactor Coolant System Vents (II.B.1)

Submit a design description and operating procedures for reactor coolant system vents prior to July 1, 1981 and complete installation prior to July 1, 1982.

(c) Plant Shielding (II.B.2)

At the next cold shutdown period of sufficient duration after material availability, but at the latest no later than prior to startup after the first refueling outage, the remaining modifications shall be completed. These modifications are as described in Alabama Power Company letter dated February 11, 1982. The modifications are to assure access to vital areas and protection of safety equipment following an accident resulting in a degraded core.

(d) Relief and Safety Valve Tests (II.D.1)

Provide information to the NRC based on tests to demonstrate qualification of relief valves, block valves, and associated piping as follows:

- (1) Report demonstrating qualification of relief valves, and associated piping prior to October 1, 1981.

- (2) Report demonstrating qualification of block valves prior to July 1, 1982.

(e) Auxiliary Feedwater Initiation and Indication  
(II.E.1.2)

Prior to startup following the first refueling, make modifications to the control and protection circuits for the auxiliary feedwater system to enhance the reliability and tolerance of the system to failures. Submit the design of these modifications to the NRC prior to July 1, 1981.

(f) Additional Accident Monitoring Instruments  
(II.F.1)

Install and provide information regarding accident monitoring instruments as follows:

- (1) Install noble gas effluent monitors prior to January 1, 1982.
- (2) Install capability for continuous sampling of plant gas effluents prior to exceeding 5 percent power.
- (3) Install high-range radioactivity monitors in the containment prior to January 1, 1982.
- (4) Provide a description of containment pressure instruments prior to June 1, 1981 and install pressure instruments prior to January 1, 1982.
- (5) Provide a description of a containment water level measurement system prior to June 1, 1981 and install water level system prior to January 1, 1982.
- (6) Provide a description of the use of the installed hydrogen indication monitors prior to June 1, 1981 and make modifications, if required, prior to January 1, 1982.

(g) Inadequate Core Cooling Instruments (II.F.2)

For the proposed reactor vessel water level instrument,

- (1) Provide detailed design information identified in Section 22.5 of SER Supplement 5, Requirement A, Parts (1)(a), (3), (4), (7), (8), and (9) prior to July 1, 1981.
  - (2) Provide results of tests on Farley Unit 1 for consideration in this facility prior to July 1, 1981.
  - (3) Provide planned program to complete development, including any additional test data needed to determine feasibility, prior to January 1, 1982.
- (h) Commission Orders on Babcock & Wilcox Plants, Subsequently Applied to all PWR Plants (II.K.2)

Prior to January 1, 1982,

- (1) Submit a detailed analysis of the thermal mechanical conditions in the reactor vessel during recovery from small break LOCAs with an extended loss of all feedwater (II.K.2.13).
  - (2) Provide an analysis of the potential for voiding in the reactor coolant system during anticipated transients (II.K.2.17).
  - (3) Provide a bench mark analysis of sequential auxiliary feedwater flow to the steam generators following a loss of main feedwater (II.K.2.19).
- (i) Final Recommendations of B&O Task Force (II.K.3)
- (1) With respect to an automatic power-operated relief valve (PORV) isolation system (II.K.3.1 and II.K.3.2):
    - (i) Perform a safety examination of an automatic PORV isolation system (II.K.3.1) per the requirement of II.K.3.2.
    - (ii) If an automatic PORV isolation system is required per (i) above, provide the information identified under the "Documentation Required" section of II.K.3.1 of NUREG-0737 by July 1, 1981.

- (iii) If required from (i) above, complete installation and testing of the modified automatic PORV isolation system prior to startup following the first refueling outage that is scheduled to occur more than 6 months after NRC approval of the design.
- (2) With respect to tripping of reactor coolant pumps (RCPs) (II.K.3.5):
  - (i) Submit to the NRC for approval either (1) an evaluation which shows that sufficient time is available to the operator to manually trip the RCPs in the event of a small break LOCA, or (2) a description of design modifications required to provide for an automatic pump trip. This submittal is required within three months after NRC determination of acceptability of the small break LOCA model based on comparisons with LOFT test L3-6.
  - (ii) If required based on (i) above, complete plant modifications to provide for automatic tripping of reactor coolant pumps within 11 months after NRC determination of model acceptability, provided there is an appropriate outage during that time interval to complete installation or during the first such scheduled outage occurring thereafter.
- (3) With respect to reliability of reactor coolant pump seal cooling (II.K.3.25),
  - (i) Prior to January 1, 1982, submit results of analyses or experiments to determine consequences of a loss of cooling water to the reactor coolant pump seal coolers and describe any modifications found necessary.
  - (ii) Prior to July 1, 1982, complete any necessary modifications.

(4) With respect to a revised small break LOCA model,

(i) Prior to January 1, 1982, submit to the NRC a revised model to account for recent experimental data (II.K.3.30).

(ii) Submit to the NRC the results of plant-specific calculations using the NRC-approved revised model prior to January 1, 1983.

D. The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Joseph M. Farley Nuclear Plant Physical Security Plan," with revisions submitted through November 17, 1987; "Joseph M. Farley Nuclear Plant Guard Training and Qualification Plan," with revisions submitted through April 12, 1982; and "Joseph M. Farley Nuclear Plant Safeguards Contingency Plan," with revisions submitted through March 28, 1980. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

E. The licensee shall report any violations of the requirements contained in Section 2, Items C.(3) through C.(21), and D of this license within 24 hours by telephone and confirm by telegram, mailgram, or facsimile transmission to the Director for Region II of the Office of Inspection and Enforcement, or the Director's designate, no later than the first working day following the violation, with a written followup report within 14 days.

F. Alabama Power Company shall meet the following antitrust conditions:

(1) Alabama Power Company shall recognize and accord to Alabama Electric Cooperative (AEC) the status of a competing electric utility in central and southern Alabama.

(2) Alabama Power Company shall offer to sell to AEC an undivided ownership interest in Units 1 and 2 of the Farley Nuclear Plant. The percentage of ownership interest to be so offered shall be an amount based on the relative sizes of the respective peak loads of



AEC and Alabama Power Company (excluding from the Alabama Power Company's peak load that amount imposed by members of AEC upon the electric system of Alabama Power Company) occurring in 1976. The price to be paid by AEC for its proportionate share of Units 1 and 2, determined in accordance with the foregoing formula, will be established by the parties through good faith negotiations. The price shall be sufficient to fairly reimburse Alabama Power Company for the proportionate share of its total costs related to the Units 1 and 2 including, but not limited to, all costs of construction, installation, ownership and licensing, as of a date, to be agreed to by the two parties, which fairly accommodates both their respective interests. The offer by Alabama Power Company to sell an undivided ownership interest in Units 1 and 2 may be conditioned, at Alabama Power Company's option, on the agreement by AEC to waive any right of partition of the Farley Plant and to avoid interference in the day-to-day operation of the plant.

- (3) Alabama Power Company will provide, under contractual arrangements between Alabama Power Company and AEC, transmission services via its electric system (a) from AEC's electric system to AEC's off-system members; and (b) to AEC's electric system from electric systems other than Alabama Power Company's, and from AEC's electric system to electric systems other than Alabama Power Company's. The contractual arrangements covering such transmission services shall embrace rates and charges reflecting conventional accounting and ratemaking concepts followed by the Federal Energy Regulatory Commission (or its successor in function) in testing the reasonableness of rates and charges for transmission services. Such contractual arrangements shall contain provisions protecting Alabama Power Company against economic detriment resulting from transmission line or transmission losses associated therewith.
- (4) Alabama Power Company shall furnish such other bulk power supply services as are reasonably available from its system.
- (5) Alabama Power Company shall enter into appropriate contractual arrangements amending the 1972 Interconnection Agreement as last amended to provide for a reserve sharing arrangement between Alabama Power Company and AEC under which Alabama Power Company will provide reserve generating capacity in accordance with practices applicable to its responsibility to the operating companies of the Southern Company System. AEC shall maintain a minimum level expressed as a percentage of coincident peak one-hour kilowatt load equal to the percent reserve level similarly expressed for

Alabama Power Company as determined by the Southern Company System under its minimum reserve criterion then in effect. Alabama Power Company shall provide to AEC such data as needed from time to time to demonstrate the basis for the need for such minimum reserve level.

- (6) Alabama Power Company shall refrain from taking any steps, including but not limited to the adoption of restrictive provisions in rate filings or negotiated contracts for the sale of wholesale power, that serve to prevent any entity or group of entities engaged in the retail sale of firm electric power from fulfilling all or part of their bulk power requirements through self-generation or through purchases from some other source other than Alabama Power Company. Alabama Power Company shall further, upon request and subject to reasonable terms and conditions, sell partial requirements power to any such entity. Nothing in this paragraph shall be construed as preventing applicant from taking reasonable steps, in accord with general practice in the industry, to ensure that the reliability of its system is not endangered by any action called for herein.
- (7) Alabama Power Company shall engage in wheeling for and at the request of any municipally-owned distribution system:
- (1) of electric energy from delivery points of Alabama Power Company to said distribution system(s); and
  - (2) of power generated by or available to a distribution system as a result of its ownership or entitlement<sup>\*</sup> in generating facilities, to delivery points of Alabama Power Company designated by the distribution system.

Such wheeling services shall be available with respect to any unused capacity on the transmission lines of Alabama Power Company, the use of which will not jeopardize Alabama Power Company's system. The contractual arrangements covering such wheeling services shall be determined in accordance with the principles set forth in Condition (3) herein.

<sup>\*</sup> "Entitlement" includes but is not limited to power made available to an entity pursuant to an exchange agreement.

Alabama Power Company shall make reasonable provisions for disclosed transmission requirements of any distribution system(s) in planning future transmission. By "disclosed" is meant the giving of reasonable advance notification of future requirements by said distribution system(s) utilizing wheeling services to be made available by Alabama Power Company.

- (8) The foregoing conditions shall be implemented in a manner consistent with the provisions of the Federal Power Act and the Alabama Public Utility laws and regulations thereunder and all rates, charges, services or practices in connection therewith are to be subject to the approval of regulatory agencies having jurisdiction over them.

Southern Nuclear shall not market or broker power or energy from Joseph M. Farley Nuclear Plant, Units 1 and 2. Alabama Power Company shall continue to be responsible for compliance with the obligations imposed on it by the antitrust conditions contained in this paragraph 2.F. of the license. Alabama Power Company shall be responsible and accountable for the actions of its agent, Southern Nuclear, to the extent said agent's actions may, in any way, contravene the antitrust conditions of this paragraph 2.F.

- G. The facility requires relief from certain requirements of 10 CFR 50.55a(g) and exemptions from Appendices G, H and J to 10 CFR Part 50. The relief and exemptions are described in the Office of Nuclear Reactor Regulation's Safety Evaluation Report, Supplement No. 5. They are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. Therefore, the relief and exemptions are hereby granted. With the granting of these the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.
- H. Southern Nuclear shall immediately notify the NRC of any accident at this facility which could result in an unplanned release of quantities of fission products in excess of allowable limits for normal operation established by the Commission.
- I. The Alabama Power Company shall have and maintain financial protection of each type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

J. The following Order<sup>\*</sup> is incorporated into this license by reference:

- (1) "Order Modifying License Confirming Additional Licensee Commitments on Emergency Response Capability (Supplement 1 to NUREG-0737)," dated July 27, 1985.

K. This license is effective as of the date of issuance and shall expire at midnight, March 31, 2021.



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\* Prior to Southern Nuclear being authorized to operate Joseph M. Farley Nuclear Plant, Unit 2, the term "licensee" referred to Alabama Power Company. Hence, the term "licensee" applies to Alabama Power Company for those orders which were full complied with prior to Southern Nuclear being added to the operating license.