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Energy to Serve Your World<sup>SM</sup>  
NEL-00-0233

December 8, 2000

Docket Nos. 50-348  
50-364

U. S. Nuclear Regulatory Commission  
ATTN.: Document Control Desk  
Washington, D. C. 20555

Joseph M. Farley Nuclear Plant  
Request for License Amendment  
Removal/Modification of Obsolete Conditions

Ladies and Gentlemen:

In accordance with the provisions of 10 CFR 50.90, Southern Nuclear Operating Company (SNC) hereby requests changes to Facility Operating License Nos. NPF-2 and NPF-8 for the Joseph M. Farley Nuclear Plant Units 1 and 2, respectively. The proposed changes either delete or modify existing license conditions which have been completed or are otherwise no longer in effect.

The basis for the proposed license changes is provided in Enclosure 1. The supporting significant hazards evaluation pursuant to 10 CFR 50.92 is provided in Enclosure 2. Based upon the analysis provided, SNC has determined the proposed changes to the Unit 1 and Unit 2 Operating Licenses do not involve a significant hazards consideration as defined by 10 CFR 50.92. Enclosure 3 provides the marked-up license pages. Enclosure 4 provides the typed license pages.

A copy of these proposed changes is being sent to Dr. Donald E. Williamson, the Alabama State Designee, in accordance with 10 CFR 50.91(b)(1). SNC requests this change be approved within one year from the date of this letter.

If you have any questions, please advise.

Respectfully submitted,

*DM*  
Dave Morey

Sworn to and subscribed before me this 8<sup>th</sup> day of December 2000

Marsha Gayle Dow  
Notary Public

My Commission Expires November 1, 2001

CHM/maf: FOL Clean Up.doc  
Enclosures:

1. Basis for Proposed Change
2. Significant Hazards Evaluation
3. Facility Operating License Mark-up Pages
4. Facility Operating License Typed Pages

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U. S. Nuclear Regulatory Commission

cc: Southern Nuclear Operating Company  
Mr. L. M. Stinson, General Manager – Farley

U. S. Nuclear Regulatory Commission, Washington, D. C.  
Mr. L. M. Padovan, Licensing Project Manager – Farley

U. S. Nuclear Regulatory Commission, Region II  
Mr. L. A. Reyes, Regional Administrator  
Mr. T. P. Johnson, Senior Resident Inspector – Farley

Alabama Department of Public Health  
Dr. D. E. Williamson, State Health Officer

**Enclosure 1**

**Joseph M. Farley Nuclear Plant  
Request for License Amendment  
Removal/Modification of Obsolete Conditions**

**Basis for Proposed Change – Unit 1**

**Basis for Proposed Change – Unit 2**

**Joseph M. Farley Nuclear Plant  
Request for License Amendment  
Removal/Modification of Obsolete Conditions**

**Basis for Proposed Change – Unit 1**

Joseph M. Farley Nuclear Plant Unit 1 Facility Operating License No. NPF-2 was issued on June 25, 1977. The license was issued with conditions containing various requirements to be completed by specified dates or prior to exceeding a specified power level. These activities have now been completed, and the license conditions are either obsolete or no longer needed. The purpose of this submittal is to delete these conditions from the Unit 1 Operating Licenses. Each proposed change and the justification for the change are addressed below.

**Proposed Change to License Condition 2.C.(3)(e)**

This condition requires the replacement of 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 modified instrumentation as identified in Amendment 65 to the Final Safety Analysis Report (FSAR) prior to startup following the first regularly scheduled refueling outage. This condition is proposed for deletion from the operating license.

**Justification for Change**

This requirement is the result of environmental qualification deficiencies identified with the originally installed instrumentation. As noted in Amendment 73 to the Unit 1 FSAR, this equipment was replaced during the first refueling outage. The requirements contained in this license condition have been met.

**Proposed Change to License Condition 2.C.(3)(i)**

For Cycle 16 only, Southern Nuclear was permitted to operate the reactor based on a risk-informed demonstration that predicted steam generator tube structural integrity is adequate to meet Regulatory Guide 1.174 numerical acceptance criteria. In accordance with Principle 5 in Regulatory Guide 1.174 concerning monitoring operational experience to ensure that performance is consistent with risk analysis predictions, if Southern Nuclear plugs or repairs steam generator tubes during Cycle 16, then Southern Nuclear shall re-inspect the steam generators to the extent necessary to verify that they have been returned to a condition consistent with the operational assessment. This condition is proposed for deletion from the operating license.

**Justification for Change**

This condition was for Cycle 16 only. No plugging or steam generator tube repairs were performed during Cycle 16. The steam generators were replaced during refueling outage 17 and the Technical Specifications were revised per Amendment 147. The requirements contained in this license condition have been met.

**Proposed Change to License Condition 2.C.(4)**

This condition requires Southern Nuclear to implement and maintain in effect the commission-approved Fire Protection Program for the facility. This condition is proposed to be rewritten as follows:

**(4) Fire Protection Program**

Southern Nuclear shall implement and maintain in effect all provisions of the approved fire protection program as described on the Final Safety Analysis Report of the facility, which implements the fire protection requirements of 10 CFR 50.48 and 10 CFR 50 Appendix R. Southern Nuclear may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown.

**Justification for Change**

This change removes the list of dated Fire Protection Safety Evaluation Reports (SERs) contained in this condition. The list of SERs serves no purpose in the operating license since the program is described completely in the FSAR, and any SERs issued subsequent to those listed could require a license amendment to add them to this condition in order for the license to remain current. It is therefore proposed that the list of dated SERs be deleted.

**Proposed Change to License Condition 2.D.**

This condition requires Southern Nuclear to implement and maintain in effect the Commission-approved physical security, guard training and qualification, and safeguards contingency plans. This condition is proposed to be rewritten as follows:

D. Southern Nuclear 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 Security Plan” (which contains the Safeguards Security Contingency Plan) and “Joseph M. Farley Nuclear Plant Security Personnel Training and Qualification Plan.” Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

### **Justification for Change**

This change removes effective revision dates from the titles of the security related plans listed in the condition. The purpose of this condition is to require Southern Nuclear to implement and maintain the plans as required by the applicable regulations. These plans are maintained in accordance with the regulations and revised as necessary; however, the actual revision dates are irrelevant with regard to the operating license. Including the revision dates in the operating license could require a license amendment each time one of the plans is revised in order for the license to remain current. It is therefore proposed that the dates be deleted.

Minor editorial changes have been made to the titles of the security related plans. The Security Plan and the Safeguards Security Contingency Plan have been combined into one document titled, "Joseph M. Farley Nuclear Plant Security Plan." The plan for training and qualifications is titled, "Joseph M. Farley Nuclear Plant Security Personnel Training and Qualification Plan." These changes are reflected in the condition text provided above and are minor editorial and administrative changes.

**Joseph M. Farley Nuclear Plant  
Request for License Amendment  
Removal/Modification of Obsolete Conditions**

**Basis for Proposed Change – Unit 2**

Joseph M. Farley Nuclear Plant Unit 2 Facility Operating License No. NPF-8 was issued on March 31, 1981. The license was issued with conditions containing various requirements to be completed by specified dates or prior to exceeding a specified power level. These activities have now been completed, and the license conditions are either obsolete or no longer needed. The purpose of this submittal is to delete these conditions from the Unit 2 Operating Licenses. Each proposed change and the justification for the change are addressed below.

By Enclosure 5 to the letter to the NRC dated December 22, 1981, (Reference 1) Alabama Power Company provided a complete update of the status of the Unit 2 License Conditions. This enclosure gives a brief description of each condition, the due date, the Alabama Power Company response letter date, remarks, including a determination of completion, and any applicable extension request. License conditions which are listed as "complete" in Reference 1 are so noted in this submittal. If further information is required or if the requirements of the condition were completed after the December 22, 1981 letter, that information is provided herein with letter references.

**Proposed Change to License Condition 2.C.(3)**

This license condition specifies that the Initial Test Program described in Section 14 of the FSAR is to be conducted without making any modifications to this program unless such changes are in accordance with the provisions of 10 CFR 50.59. This condition is proposed for deletion.

**Justification for Change**

This requirement is obsolete since the initial test program is complete and the unit is operating.

**Proposed Change to License Condition 2.C.(5)**

This condition requires Alabama Power to provide the NRC additional information concerning the inservice testing program for pumps and valves no later than 6 months prior to the end of the first 120-month interval. This condition is proposed for deletion.

**Justification for Change**

The Joseph M. Farley Nuclear Plant - Unit 2 Inservice Testing Program implements the requirements of 10 CFR 50.55 a(g). The Unit 2 Inservice Testing Program for the second 120-month interval was approved in NRC letter dated May 23, 1991 (Reference 19). This condition may therefore be deleted from the operating license.

**Proposed Change to License Condition 2.C.(6)**

This condition requires Southern Nuclear to implement and maintain in effect the commission-approved Fire Protection Program for the facility. This condition is proposed to be rewritten as follows:

**(6) Fire Protection Program**

Southern Nuclear shall implement and maintain in effect all provisions of the approved fire protection program as described on the Final Safety Analysis Report of the facility, which implements the fire protection requirements of 10 CFR 50.48 and 10 CFR 50 Appendix R. Southern Nuclear may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown.

**Justification for Change**

This change removes the list of dated Fire Protection Safety Evaluation Reports (SERs) contained in this condition. The list of SERs serves no purpose in the operating license since the program is described completely in the FSAR, and any SERs issued subsequent to those listed could require a license amendment to add them to this condition in order for the license to remain current. It is therefore proposed that the list of dated SERs be deleted.

**Proposed Change to License Condition 2.C.(7)**

This condition requires Alabama Power Company to report to the NRC within 90 days from the date of original issuance of this license any items related to emergency preparedness identified by FEMA or the NRC as requiring further action, and to complete its plans for four specific items related to emergency preparedness according to the NRC approved schedule identified in SER Supplement 5. This condition is proposed for deletion.

**Justification for Change**

By letter dated June 25, 1981 (Reference 3), Alabama Power Company submitted the status of the four listed items as required by the license condition, thus meeting the requirements of the condition.

**Proposed Change to License Condition 2.C.(8)**

This condition replaces the Action Statement of Technical Specification 3.7.4 with alternate requirements on a one-time only basis, and further states that this license condition expires 90 days from date of original issuance. This condition is proposed for deletion.

**Justification for Change**

This condition is complete per letter to the NRC dated June 29, 1981 (Reference 20) and per letter to the NRC dated December 22, 1981, (Reference 1).

**Proposed Change to License Condition 2.C.(9)(a)**

This condition requires Alabama Power Company to provide to the NRC the results of seven augmented low power tests prior to exceeding 5% power. This condition is proposed for deletion.

**Justification for Change**

This condition is complete per letter to the NRC dated May 18, 1981(Reference 21) and per letter to the NRC dated December 22, 1981, (Reference 1).

**Proposed Change to License Condition 2.C.(9)(b)**

This condition requires Alabama Power Company to provide the results of a test of natural circulation cooldown with boron mixing no later than prior to startup following the first refueling outage. This condition is proposed for deletion.

**Justification for Change**

Alabama Power Company provided information related to this condition by letters dated July 8 and October 21, 1982, which described similar tests run at other plants which can be applied to Farley Nuclear Plant. By letter dated November 10, 1982 (Reference 2), the NRC notified Alabama Power Company that they agreed with the conclusion that these tests were directly applicable to Farley Unit 2 and that the Farley procedures were adequately verified. This letter further states that License Condition 2.C.(9)(b) is considered to be satisfactorily completed.

**Proposed Change to License Condition 2.C.(10)**

This condition requires Alabama Power Company to make the post-accident sampling system fully operational prior to exceeding 5% power. This condition is proposed for deletion.

**Justification for Change**

This condition is complete per letter to the NRC dated December 22, 1981, (Reference 1).

**Proposed Change to License Condition 2.C.(11)**

This condition requires Alabama Power Company to complete the training for mitigating core damage prior to exceeding 5% power. This condition is proposed for deletion.

**Justification for Change**

This condition is complete per letter to the NRC dated December 22, 1981, (Reference 1).

**Proposed Change to License Condition 2.C.(12)**

This condition requires Alabama Power Company to modify procedures and, if necessary, equipment used for natural circulation cooldown. Three separate requirements are listed. This condition is proposed for deletion.

**Justification for Change**

**Condition 2.C.(12)(a)**

This condition is complete per letter to the NRC dated December 22, 1981, (Reference 1).

**Condition 2.C.(12)(b)**

By letter dated August 1, 1988 (Reference 4), the NRC informed Alabama Power Company that they had reviewed the response to this license condition which required provisions or modifications 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, and had concluded that the action related to this license condition was considered completed.

**Condition 2.C.(12)(c)**

By letter dated November 10, 1982 (Reference 2), the NRC informed Alabama Power Company that this license condition, which required Alabama Power Company to provide to the NRC natural circulation cooldown procedures based on test results applicable to Farley Unit 2, was considered to be satisfactorily completed.

**Proposed Change to License Condition 2.C.(13)**

This condition requires Alabama Power Company prior to exceeding 5% power to modify and test reset circuits for several items in accordance with the requirements of IE Bulletin 80-06, and to revise procedures to be consistent with the modified designs. This condition is proposed for deletion.

**Justification for Change**

This condition is complete per letter to the NRC dated December 22, 1981, (Reference 1).

**Proposed Change to License Condition 2.C.(14)**

This condition states that, prior to exceeding 5% power, certain 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. This condition is proposed for deletion.

**Justification for Change**

This condition is complete per letter to the NRC dated December 22, 1981, (Reference 1).

**Proposed Change to License Condition 2.C.(15)**

This condition requires Alabama Power Company to complete modifications to the subcooling monitor system identified in Item II.F.2, Section 22.3 in SER Supplement 5, NUREG-0117 prior to May 31, 1981. This condition is proposed for deletion.

**Justification for Change**

This condition is complete per letter to the NRC dated December 22, 1981, (Reference 1).

**Proposed Change to License Condition 2. C.(16)**

This condition requires Alabama Power Company to complete modifications to Masonry Wall 2 CBW-34 to meet NRC staff criteria prior to startup following second refueling. This condition is proposed for deletion.

**Justification for Change**

Masonry Wall 2CBW-34 was modified to meet NRC design criteria during the second refueling outage which ended October 22, 1983. The NRC acknowledged this modification by letter dated October 24, 1984 (Reference 8), and stated at that time that only one Unit 1 wall did not meet NRC criteria. The requirements associated with this license condition have been completed.

**Proposed Change to License Condition 2.C.(17)**

This condition requires Alabama Power Company to submit to the NRC prior to October 1, 1981 the design of a modified containment vent and purge system, and to install the system prior to startup following the first refueling. This condition is proposed for deletion.

**Justification for Change**

In letter to the NRC dated December 22, 1981 (Reference 1), Alabama Power Company informed the Nuclear Regulatory Commission that this condition is complete except for the installation of the modified vent and purge system. In NRC Safety Evaluation for License Amendment No. 34, issued in a letter dated May 17, 1984 (Reference 23), the NRC stated in the summary, "Our review, ... concludes that the licensee's proposed Technical Specification changes meet the intent of license conditions 2.C.(17) ..."

**Proposed Change to License Condition 2.C.(18)**

This condition requires Alabama Power Company to take certain actions with regard to the environmental qualification requirements for Class 1E equipment. This condition is proposed for deletion.

**Justification for Change**

By letter dated January 7, 1983 (Reference 5), Alabama Power Company requested closure of this license condition based on several submittals regarding the environmental qualification (EQ) of electric equipment and the publication of 10 CFR 50.49, which effectively superseded the completion date of June 30, 1982 in the license condition. All actions taken involving EQ have been in accordance with this rule since it became effective. The requirements contained in this license condition are obsolete.

**Proposed Change to License Condition 2.C.(19)(a)**

This condition requires Alabama Power Company to provide additional evaluations of the Westinghouse fuel performance code (PAD 3.3) to demonstrate its applicability to fuel burnups during successive fuel cycles prior to resuming power operation following the first refueling.

**Justification for Change**

By letter dated October 22, 1982 (Reference 12), Alabama Power Company stated that the NRC had reviewed the PAD 3.3 program as indicated in NRC letter from Mr. H. Bernard (NRC) to Mr. E. P. Rahe (Westinghouse Electric Corporation) dated July 20, 1982, and concluded that the revised model is acceptable to adequately define fuel burnup for successive Farley fuel cycles. The requirements contained in this license condition have been completed.

**Proposed Change to License Condition 2.C.(19)(b)**

This condition requires Alabama Power Company to complete the remaining modifications to the primary and backup circuit protection devices in the containment penetration circuits no later than during the second refueling outage. This condition is proposed for deletion.

**Justification for Change**

By letter dated July 26, 1982 (Reference 22) Alabama Power Company requested an extension of this condition until the second refueling outage, and the circuit protection devices were installed according to this schedule. In the Safety Evaluation for License Amendment No. 34, issued per NRC letter dated May 17, 1984 (Reference 23), which added these devices to the Technical Specifications, the NRC stated that the intent of License Condition 2.C.(19)(b) has been met.

**Proposed Change to License Condition 2.C.(19)(c)**

This condition requires Alabama Power Company to modify the lubrication system of the two Fairbanks-Morse opposed-piston diesel generators prior to resuming power operation following the first refueling. The system design and implementation schedule is required to be submitted within six months after the license is issued. This condition is proposed for deletion.

**Justification for Change**

By letter dated October 28, 1982 (Reference 6), the NRC informed Alabama Power Company that the license condition requirements had been satisfied, and that License Condition 2.C.(19)(c) was considered satisfactorily completed.

**Proposed Change to License Condition 2.C.(19)(d)**

This condition requires Alabama Power Company to inspect the main steam turbine for indications of low pressure rotor disc cracking, or replace the present low pressure rotors with refurbished rotors. This condition is proposed for deletion.

**Justification for Change**

By letter dated February 8, 1982 (Reference 10), Alabama Power Company requested that this condition be deleted in order to implement turbine inspection recommendations issued by the NRC via a letter dated August 24, 1981. However, due to outage schedule difficulties on Farley Unit 1, Alabama Power Company stated by letter dated July 1, 1982 (Reference 13) that they intended to proceed with the Unit 2 turbine rotor replacement as required by the license condition at the first refueling outage. The Unit 2 rotors were replaced as required by the license condition.

**Proposed Change to License Condition 2.C.(20)**

This condition requires Alabama Power Company to provide a schedule for bringing the facility into compliance with Revision 2 of Regulatory Guide 1.97 prior to April 30, 1981. This condition is proposed for deletion.

**Justification for Change**

By letter dated January 7, 1983 (Reference 5), Alabama Power Company provided a summary of actions taken with regard to Regulatory Guide 1.97. This letter states that the previously transmitted schedule for meeting these requirements was being withdrawn, Generic Letter 82-33 established the latest guidance for demonstrating compliance with Regulatory Guide 1.97, and that all further action on this issue was being taken in accordance with the Generic Letter. It was further stated that Alabama Power Company had completed the requirements of the license condition and requested that it be formally closed by the NRC. The requirements contained in this condition have been met.

**Proposed Change to License Condition 2.C.(21)**

This section contains conditions to be completed 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. Each of the following conditions is proposed for deletion. A description of each condition is provided, with justification for deletion.

**2.C.(21)(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.

**Justification for Deletion:**

By letter dated January 7, 1983 (Reference 5), Alabama Power Company provided a summary of actions taken on this subject and stated that actions taken by Alabama Power Company in association with the Westinghouse Owner's Group satisfy the applicable requirements. This letter further stated that Generic Letter 82-33 established revised guidance on upgrading emergency operating procedures and that subsequent action on this subject would be in accordance with the Generic Letter. The requirements contained in this condition have been met.

**2.C.(21)(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.

**Justification for Deletion:**

This condition is complete per letter to the NRC dated December 22, 1981, (Reference 1).

**2.C.(21)(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.

**Justification for Deletion:**

By letter dated December 15, 1983 (Reference 11) the NRC informed Alabama Power Company that they had completed their review of the submittals related to this subject and had performed the necessary plant inspections to insure compliance with NUREG 0737, Item II.B.2.2, and that the applicable requirements had been met.

**2.C.(21)(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.

**Justification for Deletion:**

By letter dated July 1, 1982 Alabama Power Company documented compliance with these requirements. Alabama Power Company participated in the Generic PWR Safety and Relief Valve Test Program implemented by the Electric Power Research Institute (EPRI). A plant-specific evaluation of this program was performed by Westinghouse to demonstrate that the test conditions and results are applicable to Plant Farley Units 1 and 2. Further supporting analyses were provided by letter dated November 4, 1982. By letters dated July 18, 1995 (Reference 14) and December 16, 1986 (Reference 7), the NRC informed Alabama Power Company that they had reviewed all submittals related to these items and that the responses provided were acceptable. The requirements contained in these conditions have been met.

**2.C.(21)(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.

**Justification for Deletion:**

Alabama Power Company submitted its design for auxiliary feedwater system enhancements by letter dated July 1, 1981 and received NRC approval of this design by letter dated August 7, 1981. These modifications were subsequently implemented as indicated by the Alabama Power Company letter dated June 4, 1982 (Reference 15). The requirements contained in this condition have been met.

**2.C.(21)(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.

**Justification for Deletion:**

Conditions 2.C.(21)(f)(1), (2), and (3) are complete per letter to the NRC dated December 22, 1981, (Reference 1).

By letters dated June 1 and 11, and December 22, 1981 and April 16, 1982, Alabama Power Company submitted to the NRC information concerning the instrumentation described in Conditions 2.C.(21)(f)(4), (5), and (6). By letter dated July 30, 1982 (Reference 16), the NRC informed Alabama Power Company that it had completed its review of these items and that the License Conditions were satisfied.

**2.C.(21)(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.

**Justification for deletion**

By letter dated January 7, 1983 (Reference 5), Alabama Power Company provided a summary of actions taken on this subject, stating that the Alabama Power Company letter dated June 29, 1981 documented compliance with these three conditions. It was further stated that NRC Generic Letter 82-28 established the latest guidance on this subject and all further action would be in accordance with the Generic Letter. Reference 1 also lists these items as complete. The requirements contained in this condition have been met.

**2.C.(21)(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).

**Justification for Deletion:**

- (1) As stated in the Alabama Power Company letter dated January 7, 1983 (Reference 5), License Condition 2.C.(21)(h)(1) was addressed as part of a Westinghouse Owner's Group generic effort. The required analysis was submitted to the NRC by the Westinghouse Owner's Group in a letter dated December 30, 1981. The requirements contained in this condition have been met.
- (2) By letter dated July 6, 1981 (Reference 17), the NRC informed Alabama Power Company that the concerns expressed in License Condition 2.C.(21)(h)(2) are not considered applicable to steam generators of the design used by Farley Unit 2, and that this license condition was considered complete.
- (3) As stated in the Alabama Power Company letter dated January 7, 1983 (Reference 5), compliance with License Condition 2.C.(21)(h)(3) was documented in the Alabama Power Company letter dated December 22, 1981, by referencing submittal of the required analysis attached to an April 20, 1981 letter from the Westinghouse Owner's Group. The requirements contained in this condition have been met.

**2.C.(21)(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.

**Justification for Deletion:**

Items (i) and (ii) are complete per letter to the NRC dated December 22, 1981, (Reference 1) and per Reference 1, Item (iii) was determined to be not required.

**2.C.(21)(i) Final Recommendations of B&O Task Force (II.K.3)**

**(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.

**Justification for Deletion:**

As stated in the Alabama Power Company letter dated January 7, 1983 (Reference 5), the Alabama Power Company letter dated December 22, 1981 documented compliance with these conditions by referencing submittal of the Westinghouse Owner's Group (WOG) evaluation. This WOG submittal was made in letters dated March 3, March 23, and June 15, 1981. The WOG evaluation concluded that automatic tripping of the RCPs is not required. The requirements contained in this condition have been met.

**2.C.(21)(i) Final Recommendations of B&O Task Force (II.K.3)**

**(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.

**Justification for Deletion:**

Per Reference 1, Enclosure 7, Item 8, Alabama Power Company provided responses to this item to the NRC. By letter dated July 21, 1982 (Reference 18), the NRC notified Alabama Power Company that they had evaluated these responses and determined that the integrity of the RCP seals had been adequately demonstrated for a loss of offsite power event, and that they considered this item to be resolved.

**2.C.(21)(i) Final Recommendations of B&O Task Force (II.K.3)**

**(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.

**Justification for Deletion:**

As stated in the Alabama Power Company letter dated January 7, 1983 (Reference 5), the Alabama Power Company letter dated December 22, 1981 documented compliance with these license conditions by referencing the NRC-approved small break LOCA model used in the licensing process for the Farley Nuclear Plant. Alabama Power Company subsequently committed to participate in the WOGs effort to address this issue generically, and all subsequent action on this issue was taken in accordance with the WOG effort. The requirements contained in this condition have been met.

**Proposed Change to License Condition 2.D.**

This condition requires Southern Nuclear to implement and maintain in effect the Commission-approved physical security, guard training and qualification, and safeguards contingency plans. This condition is proposed to be rewritten as follows:

- D. Southern Nuclear 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 Security Plan” (which contains the Safeguards Security Contingency Plan) and “Joseph M. Farley Nuclear Plant Security Personnel Training and Qualification Plan.” Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

**Justification for Change**

This change removes effective revision dates from the titles of the security related plans listed in the condition. The purpose of this condition is to require Southern Nuclear to implement and maintain the plans as required by the applicable regulations. These plans are maintained in accordance with the regulations and revised as necessary; however, the actual revision dates are irrelevant with regard to the operating license. Including the revision dates in the operating license could require a license amendment each time one of the plans is revised in order for the license to remain current. It is therefore proposed that the dates be deleted.

Minor editorial changes have been made to the titles of the security related plans. The Security Plan and the Safeguards Security Contingency Plan have been combined into one document titled, “Joseph M. Farley Nuclear Plant Security Plan.” The plan for training and qualifications is titled, “Joseph M. Farley Nuclear Plant Security Personnel Training and Qualification Plan.” These changes are reflected in condition text provided above and are minor editorial and administrative changes.

**Proposed Change to License Condition 2.E.**

License Condition 2.E. of the Farley Unit 2 operating license states the following:

- E. Southern Nuclear 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 follow-up report within 14 days.

**Justification for Deletion:**

As result of Information Notice 97-43, Southern Nuclear reviewed each condition of the Farley operating licenses and found this license condition to be ambiguous due to differences between the condition and current reporting requirements. Current regulations require the NRC to be notified of reportable events within one hour, four hours, or thirty days, depending on severity. A one-hour or four-hour reporting requirement is typically reserved for issues of high NRC importance, as evidenced by the NRC's reporting requirements contained in 10 CFR 50.72 and 50.73. 10.CFR 50.72(b)(1)(ii) requires one hour reports for events or conditions during operation that result in the plant being in a seriously degraded or unanalyzed condition that significantly compromises plant safety, or a condition not covered by a plant's operating or emergency procedures. The regulation contemplates reports on matters to which the NRC must respond quickly or which have immediate regulatory significance that compromises the protection of public health and safety. The events and conditions which trigger a one hour report clearly have major potential or actual safety significance. 10 CFR 50.73 describes the Licensee Event Report (LER) system. This system requires licensees to report within thirty days certain operational events and plant conditions that could affect the safe operation of the plant, but which do not have the potential for immediate degradation of the protection of public health and safety.

Thus, with its twenty-four hour reporting requirement, License Condition 2.E could imply that relatively insignificant issues (e.g. logable security events) be afforded regulatory significance comparable to those much more serious events reportable under 10 CFR 50.72.

Southern Nuclear, upon further review, believes that this license condition is unnecessary. The items cited in this license condition impose conditions which have been fulfilled or are no longer applicable, with the exception of 2.C.(4), which requires NRC approval before use of the spent fuel cask crane to lift spent fuel casks; 2.C.(6), Fire Protection Program; and 2.(D), concerning physical security (including safeguards contingency plans) and security personnel training. Reporting requirements should no longer be applicable to the items which have been fulfilled or are no longer applicable. The reportable events associated with 2.C.(4), 2.C.(6), and 2.D. can be dispositioned in accordance with the Commission's published rules and regulations.

Reportable events associated with the Fire Protection Program are currently dispositioned in accordance with the requirements contained in the Fire Hazards Analysis (Appendix 9.B. of the FSAR), and, when appropriate, 10 CFR 50.72 and 50.73. Events associated with the spent fuel cask crane can be currently dispositioned in accordance with 10 CFR 50.72 or 50.73; events associated with physical security (including safeguards contingency plans) and security personnel training are dispositioned in accordance with 10 CFR 73.71. These regulations were published subsequent to the issuance of the Farley Unit 2 Operating License in 1981.

As noted above, immediate NRC notification of reportable events is made within one hour or four hours, depending on severity, as required by 10 CFR 50.72 and other regulations. Thus, significant reporting provisions have been added to the Part 50 regulations since this license condition was first issued. This license condition should no longer be necessary to maintain the NRC cognizant of the significant events occurring at Plant Farley.

The recent revisions to 10 CFR 50.72 and 50.73, which become effective in late January 2001, and the guidance provided in NUREG-1022, Revision 2, have been reviewed. The justification for deleting License Condition 2.E. remains valid and is not affected by the upcoming revisions to 10 CFR 50.72 and 50.73.

## REFERENCES

1. Letter from F. L. Clayton of Alabama Power Company to S. A. Varga of the Nuclear Regulatory Commission dated December 22, 1981.
2. Letter from S. A. Varga of the Nuclear Regulatory Commission to F. L. Clayton of Alabama Power Company dated November 10, 1982.
3. Letter from F. L. Clayton of Alabama Power Company to B. J. Youngblood of the Nuclear Regulatory Commission dated June 25, 1981.
4. Letter from Edward A. Reeves of the Nuclear Regulatory Commission to W. G. Hairston of Alabama Power Company dated August 1, 1988.
5. Letter from F. L. Clayton of Alabama Power Company to S. A. Varga of the Nuclear Regulatory Commission dated January 7, 1983.
6. Letter from S. A. Varga of the Nuclear Regulatory Commission to F. L. Clayton of Alabama Power Company dated October 28, 1982.
7. Letter from Edward A. Reeves of the Nuclear Regulatory Commission to R. P. McDonald of Alabama Power Company dated December 16, 1986.
8. Letter from S. A. Varga of the Nuclear Regulatory Commission to R. P. McDonald of Alabama Power Company dated October 24, 1984.
9. Nuclear Regulatory Commission Safety Evaluation related to Amendment 34 to Facility Operating License No. NPF-8.
10. Letter from F. L. Clayton of Alabama Power Company to S. A. Varga of the Nuclear Regulatory Commission dated February 8, 1982.
11. Letter from S. A. Varga of the Nuclear Regulatory Commission to F. L. Clayton of Alabama Power Company dated December 15, 1983.
12. Letter from F. L. Clayton of Alabama Power Company to S. A. Varga of the Nuclear Regulatory Commission dated October 22, 1982.
13. Letter from F. L. Clayton of Alabama Power Company to S. A. Varga of the Nuclear Regulatory Commission dated July 1, 1982.
14. Letter from Letter from B. L. Siegel of the Nuclear Regulatory Commission to D. N. Morey of Southern Nuclear Operating Company dated July 18, 1995.
15. Letter from F. L. Clayton of Alabama Power Company to S. A. Varga of the Nuclear Regulatory Commission dated June 4, 1982.

16. Letter from S. A. Varga of the Nuclear Regulatory Commission to F. L. Clayton of Alabama Power Company dated July 30, 1982.
17. Letter from S. A. Varga of the Nuclear Regulatory Commission to F. L. Clayton of Alabama Power Company dated July 6, 1981.
18. Letter from J. D. Neighbors of the Nuclear Regulatory Commission to F. L. Clayton of Alabama Power Company dated July 21, 1982.
19. Letter from A. J. Mendiola of the Nuclear Regulatory Commission to W. G. Hairston, III of Alabama Power Company dated May 23, 1991.
20. Letter from F. L. Clayton, Jr. of Alabama Power Company to S. A. Varga of the Nuclear Regulatory Commission dated June 29, 1981.
21. Letter from F. L. Clayton, Jr. of Alabama Power Company to B. J. Youngblood of the Nuclear Regulatory Commission dated May 18, 1981.
22. Letter from F. L. Clayton, Jr. of Alabama Power Company to S. A. Varga of the Nuclear Regulatory Commission dated July 26, 1982.
23. Letter from S. A. Varga of the Nuclear Regulatory Commission to R. P. McDonald of Alabama Power Company dated May 17, 1984.

**Enclosure 2**

**Joseph M. Farley Nuclear Plant  
Request for License Amendment  
Removal/Modification of Obsolete Conditions**

**Significant Hazards Evaluation**

**Joseph M. Farley Nuclear Plant  
Request for License Amendment  
Removal/Modification of Obsolete Conditions**

**Significant Hazards Evaluation**

**Change Description**

In accordance with the provisions of 10 CFR 50.90, Southern Nuclear Operating Company (SNC) hereby requests changes to Facility Operating License Nos. NPF-2 and NPF-8 for the Joseph M. Farley Nuclear Plant Units 1 and 2, respectively. The proposed changes either delete or modify existing license conditions which have been completed or are otherwise no longer in effect. The deleted conditions are associated with startup, NRC requirements which were completed during early plant operations, or TMI Action Plan (NUREG 0737) items.

**10 CFR 50.92 Evaluation**

Conformance of the proposed amendment to the standards for a determination of no significant hazard as defined in 10 CFR 50.92 is shown in the following.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed amendment deletes license conditions which are completed or are otherwise obsolete. As such, the change is strictly administrative. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously analyzed?

The proposed amendment deals with operating license reporting conditions and has no effect on the type of accidents that have been considered at Plant Farley. Therefore, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the change involve a significant reduction in a margin of safety?

The requirements associated with the deleted license conditions have been completed; the conditions are therefore obsolete. Removing these conditions from the license is an administrative and editorial activity. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

**Conclusion**

Based on the preceding evaluation, it is concluded that the proposed changes to Facility Operating License Nos. NPF-2 and NPF-8 are acceptable and the proposed license amendments do not involve significant hazards considerations as defined in 10 CFR 50.92.

**Enclosure 3**

**Joseph M. Farley Nuclear Plant  
Request for License Amendment  
Removal/Modification of Obsolete Conditions**

**Unit 1 Facility Operating License (NPF-2) Mark-up Pages**

**Unit 2 Facility Operating License (NPF-8) Mark-up Pages**

**Enclosure 3**

**Joseph M. Farley Nuclear Plant  
Request for License Amendment  
Removal/Modification of Obsolete Conditions**

**Unit 1 Facility Operating License (NPF-2)  
Mark-up Pages**

**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 Alabama Power Company 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 or Farley) 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;

- E. **Southern Nuclear Operating Company\* (herein called Southern Nuclear) is technically qualified and, together, Southern Nuclear and Alabama Power Company 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 Parts 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 Southern Nuclear and Alabama Power Company to read as follows:**

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\* Southern Nuclear succeeds Alabama Power Company as the operator of Joseph M. Farley Nuclear Plant, Unit 1. 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.

- 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

Southern Nuclear is authorized to operate the facility at steady state reactor core power levels not in excess of 2775 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. 147, are hereby incorporated in the license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications.

(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

(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. A procedure for the recording and management of data;
5. Procedures 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.

(h) The Additional Conditions contained in Appendix C, as revised through Amendment No. 146, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the additional conditions.

(i) For Cycle 16 only, Southern Nuclear shall be permitted to operate the reactor based on a risk-informed demonstration that predicted steam generator tube structural integrity is adequate to meet Regulatory Guide 1.174 numerical acceptance criteria. In accordance with Principle 5 in Regulatory Guide 1.174 concerning monitoring operational experience to ensure that performance is consistent with risk analysis predictions, if Southern Nuclear plugs or repairs steam generator tubes during Cycle 16, then Southern Nuclear shall reinspect the steam generators to the extent necessary to verify that they have been returned to a condition consistent with the operational assessment.

(4) Fire Protection

Southern Nuclear shall implement and maintain in effect all provisions of the approved fire protection program as described on the Final Safety Analysis Report for the facility and as approved in the Fire Protection Safety Evaluation Reports dated February 12, 1979, August 24, 1983, December 30, 1983, November 19, 1985, September 10, 1986, and December 29, 1986. Southern Nuclear may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown.

, which implements the fire protection requirements of 10 CFR 50.48 and 10 CFR 50 Appendix R.

**Security Personnel**

**(which contains the Safeguards Security Contingency Plan) and**

D. Southern Nuclear 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) Southern Nuclear 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, Southern Nuclear 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, Southern Nuclear 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.

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\* "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. This license is effective as of the date of issuance and shall expire at midnight, June 25, 2017.

**FOR THE NUCLEAR REGULATORY COMMISSION**

**Roger S. Boyd, Director  
Division of Project Management  
Office of Nuclear Reactor Regulation**

**Attachments:**

- 1. Appendices A & B - Technical Specifications**
- 2. Preoperational Tests, Startup Tests and Other Items Which Must Be Completed Prior to Proceeding to Succeeding Operational Modes**
- 3. Appendix C - Additional conditions**

**Date of Issuance: June 25, 1977**

**Enclosure 3**

**Joseph M. Farley Nuclear Plant  
Request for License Amendment  
Removal/Modification of Obsolete Conditions**

**Unit 2 Facility Operating License (NPF-8)  
Mark-up Pages**

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

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 license filed by Alabama Power Company 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 I, 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 or Farley), 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;

- E. Southern Nuclear Operating Company\* (herein called Southern Nuclear) is technically qualified and, together, Southern Nuclear and Alabama Power Company 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. 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 Southern Nuclear and Alabama Power Company to read as follows:

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\* Southern Nuclear succeeds Alabama Power Company as the operator of Joseph M. Farley Nuclear Plant, Unit 2. 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.

- 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, "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 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 2775 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 137, are hereby incorporated in the license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications.

(3) Initial Test Program

Alabama Power Company shall conduct the initial test program (set forth in Section 14 of the 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; and

d. Failure to complete any tests included in the described program (planned or scheduled) for power levels up to the authorized power level.

(4) Southern Nuclear 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.

(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

Southern Nuclear shall implement and maintain in effect all provisions of the approved fire protection program as described on the Final Safety Analysis Report for the facility and as approved in the Fire Protection Safety Evaluation Reports dated February 12, 1979, August 24, 1983, December 30, 1983, November 19, 1985, September 10, 1986, and December 29, 1986. Southern Nuclear may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown.

, which implements the fire protection requirements of 10 CFR 50.48 and 10 CFR 50 Appendix R.

- (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.1.2 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.

(22) Additional Conditions

The Additional conditions contained in Appendix C, as revised through Amendment No. 137, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the additional conditions.

D. Southern Nuclear 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. Southern Nuclear 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,

**Security Personnel**

**(which contains the Safeguards Security Contingency Plan) and**

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.

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\* "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. Alabama Power Company shall have and maintain financial protection of such 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. This license is effective as of the date of issuance and shall expire at midnight, March 31, 2021.

FOR THE NUCLEAR REGULATORY COMMISSION

Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

**Attachment:**

1. Appendix A - Technical Specifications  
(NUREG-0697, as revised)
2. Appendix B - Environmental Protection Plan
3. Appendix C - Additional conditions

**Date of Issuance:**

March 31, 1981

**Enclosure 4**

**Joseph M. Farley Nuclear Plant  
Request for License Amendment  
Removal/Modification of Obsolete Conditions**

**Unit 1 Facility Operating License (NPF-2) Typed Pages**

**Unit 2 Facility Operating License (NPF-8) Typed Pages**

**Enclosure 4**

**Joseph M. Farley Nuclear Plant  
Request for License Amendment  
Removal/Modification of Obsolete Conditions**

**Unit 1 Facility Operating License (NPF-2)  
Typed Pages**

**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 Alabama Power Company 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 or Farley) 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;
  - E. Southern Nuclear Operating Company\* (herein called Southern Nuclear) is technically qualified and, together, Southern Nuclear and Alabama Power Company are financially qualified to engage in the activities authorized by this operating license in accordance with the rules and regulations of the Commission;

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\* Southern Nuclear succeeds Alabama Power Company as the operator of Joseph M. Farley Nuclear Plant, Unit 1. 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.

- 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 Parts 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 Southern Nuclear and Alabama Power Company 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

Southern Nuclear is authorized to operate the facility at steady state reactor core power levels not in excess of 2775 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. 147, are hereby incorporated in the license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications.

(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

(e) Deleted per Amendment ##

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. A procedure for the recording and management of data;
  5. Procedures 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.
- (h) The Additional Conditions contained in Appendix C, as revised through Amendment No. 146, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the additional conditions.
- (i) Deleted per Amendment ##

**(4) Fire Protection**

Southern Nuclear shall implement and maintain in effect all provisions of the approved fire protection program as described on the Final Safety Analysis Report for the facility, which implements the fire protection requirements of 10 CFR 50.48 and 10 CFR 50 Appendix R. Southern Nuclear may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown.

- D. Southern Nuclear 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 Security Plan," (which contains the Safeguards Security Contingency Plan) and "Joseph M. Farley Nuclear Plant Security Personnel Training and Qualification Plan." 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) Southern Nuclear 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, Southern Nuclear 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, Southern Nuclear 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.

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

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.

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. This license is effective as of the date of issuance and shall expire at midnight, June 25, 2017.

**FOR THE NUCLEAR REGULATORY COMMISSION**

**Roger S. Boyd, Director  
Division of Project Management  
Office of Nuclear Reactor Regulation**

**Attachments:**

1. **Appendices A & B - Technical Specifications**
2. **Preoperational Tests, Startup Tests and Other Items Which Must Be Completed Prior to Proceeding to Succeeding Operational Modes**
3. **Appendix C - Additional conditions**

**Date of Issuance: June 25, 1977**

**Enclosure 4**

**Joseph M. Farley Nuclear Plant  
Request for License Amendment  
Removal/Modification of Obsolete Conditions**

**Unit 2 Facility Operating License (NPF-8)  
Mark-up Pages**

**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 license filed by Alabama Power Company 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 I, 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 or Farley), 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;
  - E. Southern Nuclear Operating Company\* (herein called Southern Nuclear) is technically qualified and, together, Southern Nuclear and Alabama Power Company 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;

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\* Southern Nuclear succeeds Alabama Power Company as the operator of Joseph M. Farley Nuclear Plant, Unit 2. Southern Nuclear is authorized to act a agent for Alabama Power Company and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

- 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 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 Southern Nuclear and Alabama Power Company 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, "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 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 2775 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 137, are hereby incorporated in the license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications.

(3) Deleted per Amendment ##

(4) Southern Nuclear 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.

(5) Deleted per Amendment ##

(6) Fire Protection

Southern Nuclear shall implement and maintain in effect all provisions of the approved fire protection program as described on the Final Safety Analysis Report for the facility, which implements the fire protection requirements of 10 CFR 50.48 and 10 CFR 50 Appendix R. Southern Nuclear may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown.

(7) Deleted per Amendment ##

(8) Deleted per Amendment ##

(9) Deleted per Amendment ##

(10) Deleted per Amendment ##

(11) Deleted per Amendment ##

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- (17) Deleted per Amendment ##
- (18) Deleted per Amendment ##
- (19) Deleted per Amendment ##
- (20) Deleted per Amendment ##
- (21) Deleted per Amendment ##
- (22) Additional Conditions

The Additional conditions contained in Appendix C, as revised through Amendment No. 137, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the additional conditions.

- D. Southern Nuclear 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 Security Plan," (which contains the Safeguards Security Contingency Plan) and "Joseph M. Farley Nuclear Plant Security Personnel Training and Qualification Plan." Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.
- E. Deleted per Amendment ##
- 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\* 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.

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.

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

- 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. Alabama Power Company shall have and maintain financial protection of such 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. This license is effective as of the date of issuance and shall expire at midnight, March 31, 2021.

FOR THE NUCLEAR REGULATORY COMMISSION

Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

**Attachment:**

1. Appendix A - Technical Specifications  
(NUREG-0697, as revised)
2. Appendix B - Environmental Protection Plan
3. Appendix C - Additional conditions

**Date of Issuance:**  
March 31, 1981