

Mr. D. N. Morey
Vice President - Farley Project
Southern Nuclear Operating
Company, Inc.
Post Office Box 1295
Birmingham, Alabama 35201-1295

May 21, 1996

SUBJECT: ISSUANCE OF AMENDMENTS - JOSEPH M. FARLEY NUCLEAR PLANT,
UNITS 1 AND 2 (TAC NOS. M94305 and M94306)

Dear Mr. Morey:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 119 to Facility Operating License No. NPF-2 and Amendment No. 111 to Facility Operating License No. NPF-8 for the Joseph M. Farley Nuclear Plant, Units 1 and 2. The amendments change the Technical Specifications (TS) in response to your submittal dated December 19, 1995, and supplemented by letters dated January 5, 1996 and May 3, 1996.

The amendments replace the requirements associated with the control room emergency ventilation system contained in TS Section 3/4.7.7 with requirements related to the operation of the control room emergency filtration/pressurization system and the control room air conditioning system. In addition, a one-time extension to the allowable outage time for the control room recirculation filtration system is included to facilitate implementation of design modifications.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by:

Byron L. Siegel, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-348, 50-364-P

Enclosures: 1. Amendment No. 119 to NPF-2
2. Amendment No. 111 to NPF-8
3. Safety Evaluation

cc w/encls: See next page

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DOCUMENT NAME: G:\FARLEY\FAR94305.AMD * see previous concurrence

OFFICE	DRPE/PD22/LA *	DRPE/PD22/RM	BC:SPLB	OGC*	DRPE/PD22/D
NAME	L. Berry	BSiegel	LMarsh	RBachmann	H. Berkow
DATE	5/20/96	5/8/96	5/14/96	3/29/96	5/21/96

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

May 21, 1996

Mr. D. N. Morey
Vice President - Farley Project
Southern Nuclear Operating
Company, Inc.
Post Office Box 1295
Birmingham, Alabama 35201-1295

SUBJECT: ISSUANCE OF AMENDMENTS - JOSEPH M. FARLEY NUCLEAR PLANT,
UNITS 1 AND 2 (TAC NOS. M94305 and M94306)

Dear Mr. Morey:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 119 to Facility Operating License No. NPF-2 and Amendment No. 111 to Facility Operating License No. NPF-8 for the Joseph M. Farley Nuclear Plant, Units 1 and 2. The amendments change the Technical Specifications (TS) in response to your submittal dated December 19, 1995, and supplemented by letters dated January 5, 1996 and May 3, 1996.

The amendments replace the requirements associated with the control room emergency ventilation system contained in TS Section 3/4.7.7 with requirements related to the operation of the control room emergency filtration/pressurization system and the control room air conditioning system. In addition, a one-time extension to the allowable outage time for the control room recirculation filtration system is included to facilitate implementation of design modifications.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

A handwritten signature in cursive script, reading "Byron L. Siegel", is written over the typed name.

Byron L. Siegel, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-348, 50-364

Enclosures: 1. Amendment No. 119 to NPF-2
2. Amendment No. 111 to NPF-8
3. Safety Evaluation

cc w/encls: See next page

Mr. D. N. Morey
Southern Nuclear Operating
Company, Inc.

Joseph M. Farley Nuclear Plant

cc:

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General Manager -
Southern Nuclear Operating Company
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Southern Nuclear Operating Company
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Southern Nuclear Operating Company
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Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
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Atlanta, Georgia 30323

Resident Inspector
U.S. Nuclear Regulatory Commission
7388 N. State Highway 95
Columbia, Alabama 36319



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

ALABAMA POWER COMPANY

DOCKET NO. 50-348

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 119
License No. NPF-2

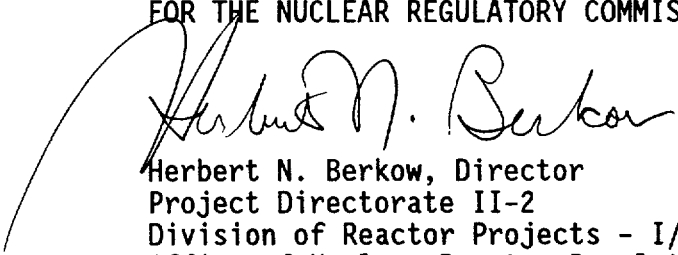
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Southern Nuclear Operating Company, Inc. (Southern Nuclear), dated December 19, 1995, as supplemented by letters dated January 5, 1996 and May 3, 1996, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications, as indicated in the attachment to this license amendment; and paragraph 2.C.(2) of Facility Operating License No. NPF-2 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 119, are hereby incorporated in the license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 21, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 119

TO FACILITY OPERATING LICENSE NO. NPF-2

DOCKET NO. 50-348

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

Remove Pages

3/4 7-16
3/4 7-17
3/4 7-17a

B 3/4 7-4

Insert Pages

3/4 7-16
3/4 7-17
3/4 7-17a
3/4-7-17b
B 3/4 7-4
B 3/4 7-4a

PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

CONTROL ROOM EMERGENCY FILTRATION/PRESSURIZATION SYSTEM (CREFS)

LIMITING CONDITION FOR OPERATION

3.7.7.1 Two Control Room Emergency Filtration/Pressurization System (CREFS) trains shall be OPERABLE.

APPLICABILITY: ALL MODES, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel.

ACTION:

MODES 1, 2, 3 and 4:

With one CREFS train inoperable, restore the inoperable train to OPERABLE status within 7* days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5, 6, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel:

- a. With one CREFS train inoperable, restore the inoperable system to OPERABLE status within 7 days or immediately place the OPERABLE CREFS train in the emergency recirculation mode or immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.
- b. With both CREFS trains inoperable, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

SURVEILLANCE REQUIREMENTS

4.7.7.1 Each CREFS train shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the pressurization and recirculation system HEPA filters and charcoal adsorbers and verifying that the pressurization system has operated for at least 10 hours with the heater on during the past 31 days.

* A one-time extension to 30 days for each train of the recirculation filtration function of CREFS is granted for implementation of control room cooling design changes. The provisions of specification 3.0.4 are not applicable during this 30-day extension. This one-time extension expires on completion of the Unit 1 14th refueling outage (Spring '97).

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release that could have contaminated the charcoal adsorbers or HEPA filters in any ventilation zone communicating with the system by:
 - 1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria of greater than or equal to 99.5% filter efficiency while operating the system at a flow rate indicated in Note 1 and using the following test procedures:
 - (a) A visual inspection of the control room emergency air cleanup system shall be made before each DOP test or activated carbon adsorber section leak test in accordance with Section 5 of ANSI N510-1980.
 - (b) An in-place DOP test for the HEPA filters shall be performed in accordance with Section 10 of ANSI N510-1980.
 - (c) A charcoal adsorber section leak test with a gaseous halogenated hydrocarbon refrigerant shall be performed in accordance with Section 12 of ANSI N510-1980.
 - 2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing efficiencies criteria given in Note 2 when tested with methyl iodide at 80°C and 70% relative humidity.
 - 3. Verifying a system flow rate as indicated in Note 1 during system operation when tested in accordance with Section 8 of ANSI N510-1980.
- c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing efficiencies criteria given in Note 2 when tested with methyl iodide at 80°C and 70% relative humidity.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- d. At least once per 18 months by:
1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate indicated in Note 1.
 2. Verifying that the filter train starts on a Safety Injection Actuation test signal.*
 3. Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/8 inch water gauge relative to the outside atmosphere during system operation.
 4. Verifying that the pressurization system heater dissipates 7.5 ± 0.8 kw when tested in accordance with Section 14 of ANSI N510-1980.
- e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.5% of the DOP when they are tested in-place in accordance with Section 10 of ANSI N510-1980 while operating the system at a flow rate indicated in Note 1.
- f. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.5% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with Section 12 of ANSI N510-1980 while operating the system at a flow rate indicated in Note 1.

Note 1.	a.	Control Room Recirculation Filter Unit	2000 cfm \pm 10%
	b.	Control Room Filter Unit	1000 cfm \pm 10%
	c.	Control Room Pressurization Filter Unit	300 cfm \pm 10%

Note 2.	a.	Control Room Recirculation Filter Unit	\geq 99%
	b.	Control Room Filter Unit	\geq 99%
	c.	Control Room Pressurization	\geq 99.825%

Surveillance Requirement 4.7.7.1.d.2 does not apply in MODES 5 and 6.

PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

CONTROL ROOM AIR CONDITIONING SYSTEM (CRACS)

LIMITING CONDITION FOR OPERATION

3.7.7.2 Two Control Room Air Conditioning System (CRACS) trains shall be OPERABLE.

APPLICABILITY: ALL MODES, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel.

ACTION:

MODES 1, 2, 3 and 4:

With one CRACS train inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.*

MODES 5, 6, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel:

- a. With one CRACS train inoperable, restore the inoperable system to OPERABLE status within 30 days or immediately place the OPERABLE CRACS train in operation or immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.
- b. With two CRACS trains inoperable, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

SURVEILLANCE REQUIREMENTS

4.7.7.2 At least once per 18 months verify that each CRACS train has the capability to remove the assumed heat loads.

* The provisions of specification 3.0.4 are not applicable during the initial 30 days of implementation of control room cooling design changes.

PLANT SYSTEMS

BASES

3/4 7.6.1 ULTIMATE HEAT SINK (RIVER)

This specification deleted.

3/4 7.6.2 ULTIMATE HEAT SINK (POND)

The limitations on the ultimate heat sink level and temperature ensure that sufficient cooling capacity is available to either 1) provide normal cooldown of the facility, or 2) to mitigate the effects of accident conditions within acceptable limits.

The limitations on minimum water level and maximum temperature are based on providing a 30 day cooling water supply to safety related equipment without exceeding their design basis temperature. The measurement of the ground water seepage at least once per 5 years will provide assurance that the 30 day supply of water is available.

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

The control room emergency filtration/pressurization system (CREFS) consists of two independent, redundant trains that recirculate and filter the control room air, and two independent, redundant trains that pressurize the control room. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criteria 19 of Appendix "A", 10CFR50.

When one CREFS train is inoperable, action must be taken to restore OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CREFS train is adequate to perform the control room protection function. However, the overall reliability is reduced because a single failure in the OPERABLE CREFS train could result in loss of CREFS function. The 7 day Completion Time is based on the low probability of a DBA occurring during this period of time period, and ability of the remaining train to provide the required capability.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filter.

The control room air conditioning system (CRACS) consists of two independent, redundant trains that provide cooling of recirculated control room air. Each control room air conditioning (CRAC) train is inoperable if it is not capable of removing the required heat load for plant conditions. The actual heat load and the heat removal capability needed to adequately cool the control room is dependent upon factors such as outdoor air temperature.

PLANT SYSTEMS

BASES

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM (continued)

With one CRAC train inoperable, the inoperable train must be returned to OPERABLE status within 30 days. This Allowed Outage Time is based on the low probability of complete loss of control room cooling due to the redundancy of the support systems, the capability of the OPERABLE train to provide the required cooling, the potential that plant staff actions can restore or mitigate the effects of component failures, and the time available to respond as loss of control room cooling does not have an immediate, irreversible impact.

While in MODES 5 and 6 during movement of irradiated fuel assemblies or movement of loads over irradiated fuel, if both trains of CRAC cannot be restored to OPERABLE status within 30 days, an OPERABLE CRAC train must be placed in operation immediately; otherwise, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

The OPERABILITY of the control room emergency ventilation system ensures that 1) the ambient air temperature does not exceed the allowable temperature for continuous duty rating for the equipment and instrumentation cooled by this system and 2) the control room will remain habitable for operations personnel during and following all credible accident conditions.

3/4.7.8 ECCS PUMP ROOM EXHAUST AIR FILTRATION SYSTEM (PENETRATION ROOM AIR FILTRATION SYSTEM)

The OPERABILITY of the penetration room air filtration system ensures that radioactive materials leaking from the ECCS equipment within the pump room following a LOCA are filtered prior to reaching the environment. The operation of this system and the resultant effect on offsite dosage calculations was assumed in the accident analyses.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filter.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

ALABAMA POWER COMPANY

DOCKET NO. 50-364

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 111
License No. NPF-8

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Southern Nuclear Operating Company, Inc. (Southern Nuclear), dated December 19, 1995, as supplemented by letters dated January 5, 1996 and May 3, 1996, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications, as indicated in the attachment to this license amendment; and paragraph 2.C.(2) of Facility Operating License No. NPF-8 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 111, are hereby incorporated in the license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 21, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 111
TO FACILITY OPERATING LICENSE NO. NPF-8
DOCKET NO. 50-364

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

Remove Pages

3/4 7-16
3/4 7-17
3/4 7-17a

B 3/4 7-4

Insert Pages

3/4 7-16
3/4 7-17
3/4 7-17a
3/4 7-17b
B 3/4 7-4
B 3/4 7-4a

PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

CONTROL ROOM EMERGENCY FILTRATION/PRESSURIZATION SYSTEM (CREFS)

LIMITING CONDITION FOR OPERATION

3.7.7.1 Two Control Room Emergency Filtration/Pressurization System (CREFS) trains shall be OPERABLE.

APPLICABILITY: ALL MODES, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel.

ACTION:

MODES 1, 2, 3 and 4:

With one CREFS train inoperable, restore the inoperable train to OPERABLE status within 7* days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5, 6, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel:

- a. With one CREFS train inoperable, restore the inoperable system to OPERABLE status within 7 days or immediately place the OPERABLE CREFS train in the emergency recirculation mode or immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.
- b. With both CREFS trains inoperable, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

SURVEILLANCE REQUIREMENTS

4.7.7.1 Each CREFS train shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the pressurization and recirculation system HEPA filters and charcoal adsorbers and verifying that the pressurization system has operated for at least 10 hours with the heater on during the past 31 days.

* A one-time extension to 30 days for each train of the recirculation filtration function of CREFS is granted for implementation of control room cooling design changes. The provisions of specification 3.0.4 are not applicable during this 30-day extension. This one-time extension expires on completion of the Unit 1 14th refueling outage (Spring '97).

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release that could have contaminate^d the charcoal adsorbers or HEPA filters in any ventilation zone communicating with the system by:
 - 1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria of greater than or equal to 99.5% filter efficiency while operating the system at a flow rate indicated in Note 1 and using the following test procedures:
 - (a) A visual inspection of the control room emergency air cleanup system shall be made before each DOP test or activated carbon adsorber section leak test in accordance with Section 5 of ANSI N510-1980.
 - (b) An in-place DOP test for the HEPA filters shall be performed in accordance with Section 10 of ANSI N510-1980.
 - (c) A charcoal adsorber section leak test with a gaseous halogenated hydrocarbon refrigerant shall be performed in accordance with Section 12 of ANSI N510-1980.
 - 2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing efficiencies criteria given in Note 2 when tested with methyl iodide at 80°C and 70% relative humidity.
 - 3. Verifying a system flow rate as indicated in Note 1 during system operation when tested in accordance with Section 8 of ANSI N510-1980.
- c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing efficiencies criteria given in Note 2 when tested with methyl iodide at 80°C and 70% relative humidity.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- d. At least once per 18 months by:
1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber bank is less than 6 inches Water Gauge while operating the system at a flow rate indicated in Note 1.
 2. Verifying that the filter train starts on a Safety Injection Actuation test signal.*
 3. Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/8 inch water gauge relative to the outside atmosphere during system operation.
 4. Verifying that the pressurization system heater dissipates 7.5 ± 0.8 kw when tested in accordance with Section 14 of ANSI N510-1980.
- e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.5% of the DOP when they are tested in-place in accordance with Section 10 of ANSI N510-1980 while operating the system at a flow rate indicated in Note 1.
- f. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.5% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with Section 12 of ANSI N510-1980 while operating the system at a flow rate indicated in Note 1.

Note 1.	a.	Control Room Recirculation Filter Unit	2000 cfm \pm 10%
	b.	Control Room Filter Unit	1000 cfm \pm 10%
	c.	Control Room Pressurization Filter Unit	300 cfm \pm 10%
Note 2.	a.	Control Room Recirculation Filter Unit	\geq 99%
	b.	Control Room Filter Unit	\geq 99%
	c.	Control Room Pressurization	\geq 99.825%

Surveillance Requirement 4.7.7.1.d.2 does not apply in MODES 5 and 6.

PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

CONTROL ROOM AIR CONDITIONING SYSTEM (CRACS)

LIMITING CONDITION FOR OPERATION

3.7.7.2 Two Control Room Air Conditioning System (CRACS) trains shall be OPERABLE.

APPLICABILITY: ALL MODES, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel.

ACTION:

MODES 1, 2, 3 and 4:

With one CRACS train inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.*

MODES 5, 6, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel:

- a. With one CRACS train inoperable, restore the inoperable system to OPERABLE status within 30 days or immediately place the OPERABLE CRACS train in operation or immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.
- b. With two CRACS trains inoperable, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

SURVEILLANCE REQUIREMENTS

4.7.7.2 At least once per 18 months verify that each CRACS train has the capability to remove the assumed heat loads.

* The provisions of specification 3.0.4 are not applicable during the initial 30 days of implementation of control room cooling design changes.

PLANT SYSTEMS

BASES

3/4 7.6.1 ULTIMATE HEAT SINK (RIVER)

This specification deleted.

3/4 7.6.2 ULTIMATE HEAT SINK (POND)

The limitations on the ultimate heat sink level and temperature ensure that sufficient cooling capacity is available to either 1) provide normal cooldown of the facility, or 2) to mitigate the effects of accident conditions within acceptable limits.

The limitations on minimum water level and maximum temperature are based on providing a 30 day cooling water supply to safety related equipment without exceeding their design basis temperature. The measurement of the ground water seepage at least once per 5 years will provide assurance that the 30 day supply of water is available.

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

The control room emergency filtration/pressurization system (CREFS) consists of two independent, redundant trains that recirculate and filter the control room air, and two independent, redundant trains that pressurize the control room. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criteria 19 of Appendix "A", 10CFR50.

When one CREFS train is inoperable, action must be taken to restore OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CREFS train is adequate to perform the control room protection function. However, the overall reliability is reduced because a single failure in the OPERABLE CREFS train could result in loss of CREFS function. The 7 day Completion Time is based on the low probability of a DBA occurring during this period of time period, and ability of the remaining train to provide the required capability.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filter.

The control room air conditioning system (CRACS) consists of two independent, redundant trains that provide cooling of recirculated control room air. Each control room air conditioning (CRAC) train is inoperable if it is not capable of removing the required heat load for plant conditions. The actual heat load and the heat removal capability needed to adequately cool the control room is dependent upon factors such as outdoor air temperature.

PLANT SYSTEMS

BASES

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM (continued)

With one CRAC train inoperable, the inoperable train must be returned to OPERABLE status within 30 days. This Allowed Outage Time is based on the low probability of complete loss of control room cooling due to the redundancy of the support systems, the capability of the OPERABLE train to provide the required cooling, the potential that plant staff actions can restore or mitigate the effects of component failures, and the time available to respond as loss of control room cooling does not have an immediate, irreversible impact.

While in MODES 5 and 6 during movement of irradiated fuel assemblies or movement of loads over irradiated fuel, if both trains of CRAC cannot be restored to OPERABLE status within 30 days, an OPERABLE CRAC train must be placed in operation immediately; otherwise, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

The OPERABILITY of the control room emergency ventilation system ensures that 1) the ambient air temperature does not exceed the allowable temperature for continuous duty rating for the equipment and instrumentation cooled by this system and 2) the control room will remain habitable for operations personnel during and following all credible accident conditions.

3/4.7.8 ECCS PUMP ROOM EXHAUST AIR FILTRATION SYSTEM (PENETRATION ROOM AIR FILTRATION SYSTEM)

The OPERABILITY of the penetration room air filtration system ensures that radioactive materials leaking from the ECCS equipment within the pump room following a LOCA are filtered prior to reaching the environment. The operation of this system and the resultant effect on offsite dosage calculations was assumed in the accident analyses.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filter.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 119 TO FACILITY OPERATING LICENSE NO. NPF-2
AND AMENDMENT NO. 111 TO FACILITY OPERATING LICENSE NO. NPF-8

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-348 AND 50-364

1.0 INTRODUCTION

By letter dated December 19, 1995, as supplemented January 5, 1996 and May 3, 1996, the Southern Nuclear Operating Company, Inc., et al. (the licensee), submitted a request for changes to the Joseph M. Farley Nuclear Plant, Units 1 and 2, Technical Specifications (TS). The requested changes would replace the requirements associated with the control room emergency ventilation system with requirements related to the operation of the control room emergency filtration/pressurization systems (CREFS) and control room air conditioning system (CRACS). In addition to the permanent TS change, the licensee requested a one-time extension to the allowable outage time (AOT) for the control room recirculation filtration system to facilitate implementation of design modifications for the CRACS. The January 5, 1996 and May 3, 1996, letters provided clarifying information that did not change the scope of the December 19, 1995, application and the initial proposed no significant hazards consideration determination.

2.0 BACKGROUND

The Farley plant has a common control room designed for both units with an independent air conditioning system, a recirculation filtration system, and an emergency pressurization system. Each system consists of two fully redundant trains and each train is capable of performing 100 percent of the control room heating, ventilation, and air conditioning (HVAC) functions for both units with the loss of the other train. The control room emergency ventilation system, referred to as the control room emergency air cleanup systems in the current TS, is required to be operable during all modes of operation. Upon receiving a containment isolation signal, the control room HVAC system will automatically switch from normal to emergency mode of operation.

The CRACS presently includes two cooling trains, each having a 100-percent capacity cooling unit. The licensee proposes to replace the existing cooling unit on each train with two 100-percent cooling units by the Spring of 1997. The installation of the air conditioning cooling units would require the existing duct work of the ventilation system to be modified.

During the CRACS modification, one train of the recirculation filtration system will be inoperable. Therefore, the licensee requested to extend the 7-day outage time allowed by the TS to 30 days on a one-time basis for each train of the recirculation filtration function of the CREFS to facilitate the CRACS design changes.

The licensee's proposed revisions to TS 3/4.7.7, "Control Room Emergency Ventilation System" are as follows:

- Replace the limiting condition for operation (LCO) in TS 3.7.7 for control room emergency air cleanup systems with TS 3.7.7.1 for control room emergency filtration/pressurization system and add TS 3.7.7.2 for the control room air conditioning system. The proposed TS 3/4.7.7.1 will address the filtration/pressurization aspects of the control room emergency air cleanup system.
- Change the AOT of the CRACS to 30 days from 7 days during Modes 1 through 6 in the proposed TS 3.7.7.2. Add an action statement in Modes 5 and 6 to state that, with one CRACS train inoperable, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.
- Delete the statement "the provisions of Specification 3.0.3 are not applicable in Mode 6" from the current TS 3.7.7(c).
- Add a note in TS 3.7.7.1 with asterisk on the AOT of the CREFS to state "a one-time extension to 30 days for each train of the recirculation filtration function of the CREFS is granted for implementation of control room cooling design changes."

3.0 EVALUATION

3.1 Permanent Control Room Emergency Ventilation System TS Changes

The staff has reviewed the proposed TS changes associated with the control room emergency ventilation system and concluded the following:

- The proposed TS for the control room emergency ventilation system are divided into two specifications based on the overall system functions. The changes reorganize the requirements of the control room emergency air cleanup system based on function rather than unit operation mode and are technically consistent with the requirements of the Westinghouse Standard Technical Specifications (STS), issued on April 7, 1995. The staff finds that the proposed TS format provides an improvement and is, therefore, acceptable.
- The proposed TS allow one train of the CRACS to be inoperable for 30 days during Modes 1 through 4 rather than 7 days as it is allowed by the current TS for the control room emergency air cleanup system. The licensee states that the current LCO allowed outage time of 7 days is

not consistent with the low probability of loss of all control room cooling, because following a loss of the CRACS, temperature changes are gradual, dependent upon outside temperature, and time is available for manual actions that can alleviate the loss of CRACS. The licensee has performed a sensitivity analysis which has determined that various operator actions can be taken which would extend the time to reach the control room component qualification temperature limit of 120°F. Since the change conforms to the STS and the licensee has provided adequate justification for increasing the inoperability time for CRACS, the staff finds the proposed TS change acceptable.

The action statement for Modes 5 and 6 also changes the AOT with one CRACS train inoperable from 7 days to 30 days and adds an alternative action to immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel. The added alternative action, to suspend core alterations and the movement of spent fuel assemblies, limits fission product releases. The change is consistent with the STS and the staff finds the proposed change acceptable.

- The licensee's removal of the statement "the provisions of Specification 3.0.3 are not applicable in Mode 6" is found to be acceptable because the plant is already in the most restrictive condition required by LCO 3.0.3 when Mode 5 or 6 is reached. The proposed TS did not specify that the plant must enter LCO 3.0.3 immediately during Modes 1 through 4 when both trains of CREFS or CRACS are inoperable. The staff finds this acceptable because if both trains of CREFS or CRACS are inoperable, in accordance with the TS, the licensee is required to enter LCO 3.0.3. Nevertheless, the licensee in its improved STS conversion, should include this action statement to be consistent with the improved STS.

3.2 One-Time Extension of AOT for CREFS

The staff also reviewed the licensee's proposed TS change related to the one-time AOT extension of 30 days for each train of the CREFS.

The licensee stated in its submittal that measures will be taken to limit the unavailability of the recirculation filtration system during the modification, which includes detailed planning of the work sequence, prefabrication of components and staging of parts. In addition, the control room operators will be briefed on mitigative actions that may be taken in the unlikely event of an accident involving a release and the accompanying failure of the available train of the recirculation filtration system. These compensatory measures include donning of filter masks (respiratory protection) and the use of portable recirculation filtration units that are available on site.

Although the CREFS will not meet the single failure criterion during the extended AOT period, the capability to maintain a positive pressure in the control room will not be affected by the AOT extension of CREFS because the control room pressurization system has separate intake air filtration and is therefore, independent of the CRACS and the recirculation filtration system.

In addition, the licensee also provided a probabilistic risk assessment based on the Farley Individual Plant Evaluation (IPE) and the EPRI Probabilistic Safety Assessment (PSA) Application Guide (EPRI TR-105396, August 1995). The Farley IPE, identifies early containment airborne release categories, which would not allow time for compensatory measures in the event of a random failure of the operable filtration system. The total early release frequency from these categories is $5.19\text{E-}07$ per reactor-year. For the planned CRACS replacement evolution of 60 days, this represents a conditional probability of a core damage event occurring at $8.53\text{E-}08$ per unit or $1.71\text{E-}07$ overall since the recirculation filter units are shared between both units. In accordance with the EPRI PSA Application Guide criteria, a temporary increase in containment large early release probability (LERP) risk of less than $1.0\text{E-}07$ or a core damage probability (CDP) risk of less than $1.0\text{E-}06$ would be considered non risk-significant. With the LERP between $1.0\text{E-}07$ and $1.0\text{E-}06$, other non-quantitative arguments may apply, which could still justify the increase as non-risk significant. The licensee has stated that if a conservative failure probability of 0.5 for the operable control room air filtration system is taken, in combination with a large early release, the actual LERP would be less than $1.0\text{E-}07$ which, according to the EPRI guidelines, is non-risk significant.

A policy and acceptance criteria for risk-based TS are currently under development by the staff. In addition, although the staff agrees with the high level concepts proposed in the EPRI PSA Application Guide, it has not as yet endorsed the methodological details or decision criteria contained in the guide. Nevertheless, the licensee's risk assessment summarized above, in combination with the compensatory measures to be taken by the licensee, further supports the conclusion that the extension of the AOT is non-risk significant.

The licensee has also stated that this case does not represent an increase in release probability but a potential increase in dose to the control room operators following an event during which the control room filtration system failed.

The staff has reviewed the information provided by the licensee and concludes that the AOT extension for the CREFS is acceptable based on the following:

- The licensee is providing detailed work planning to minimize the unavailability of the CREFS.
- The licensee has planned compensatory measures in the event of an accident and failure of the operating CREFS train to limit exposure of control room operators.
- The licensee has evaluated the LERP based on its IPE and EPRI PSA guidelines and determined that the probability of an accident in combination with the failure of the operating train of CREFS is non-risk significant.

- Since the control room pressurization system, including the intake air filtration system, is independent of the CRACS and the recirculation filtration system the capability to maintain a positive pressure in the control room and to filter outside air will not be affected during the extended AOT.
- Although the one-time AOT extension for the recirculation filtration system increases the system unavailability during the planned CRACS design changes, the net effect represents a benefit to plant safety due to the enhancement to control room cooling capability and reliability.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of Alabama official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change the surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (61 FR 1637 dated January 22, 1996). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Date: May 21, 1996