



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

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

THE CITY OF ANAHEIM, CALIFORNIA

DOCKET NO. 50-361

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 124
License No. NPF-10

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Southern California Edison Company, et al. (SCE or the licensee) dated September 16, 1994, 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;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

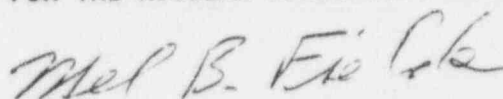
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-10 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 124, are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance to be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Mel B. Fields, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: August 23, 1995

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 124 TO FACILITY OPERATING LICENSE NO. NPF-10

DOCKET NO. 50-361

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by Amendment number and contain marginal lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE

3/4 2-1
B 3/4 2-1

INSERT

3/4 2-1
B 3/4 2-1

3/4.2 POWER DISTRIBUTION LIMITS

3/4.2.1 LINEAR HEAT RATE

LIMITING CONDITION FOR OPERATION

3.2.1 The linear heat rate shall not exceed 13.0 kw/ft.

APPLICABILITY: MODE 1 above 20% of RATED THERMAL POWER.

ACTION:

- a. With COLSS in service and the linear heat rate not being maintained as indicated by COLSS calculated core power exceeding the COLSS calculated core power operating limit based on linear heat rate (kw/ft):
 1. Restore the linear heat rate to within its limits within 1 hour, or
 2. Reduce THERMAL POWER to less than or equal to 20% of RATED THERMAL POWER within the next 6 hours.
- b. With COLSS not in service and the linear heat rate not being maintained as indicated by any OPERABLE Local Power Density channel exceeding the linear heat rate limit:
 1. Within 15 minutes initiate surveillance requirements 4.2.1.2 and restore the linear heat rate to within limits within 4 hours, or
 2. Reduce THERMAL POWER to less than or equal to 20% of RATED THERMAL POWER within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.2.1.1 The provisions of Specification 4.0.4 are not applicable.

4.2.1.2 The linear heat rate shall be determined to be within its limits when THERMAL POWER is above 20% of RATED THERMAL POWER by continuously monitoring the core power distribution with the Core Operating Limit Supervisory System (COLSS) or, with the COLSS out of service, by verifying at least once per 2 hours that the linear heat rate, as indicated on all OPERABLE Local Power Density channels, is within the limit of 13.0 kw/ft.

4.2.1.3 With COLSS not in service and the linear heat rate not being maintained as indicated by any OPERABLE Local Power Density Channel exceeding the linear heat rate limit, verify every 15 minutes that there is no adverse trend in the linear heat rate.

4.2.1.4 At least once per 31 days, the COLSS Margin Alarm shall be verified to actuate at a THERMAL POWER level less than or equal to the core power operating limit based on kw/ft.

POWER DISTRIBUTION LIMITS

3/4.2.2 PLANAR RADIAL PEAKING FACTORS - F_{xy}

LIMITING CONDITION FOR OPERATION

3.2.2 The measured PLANAR RADIAL PEAKING FACTORS (F_{xy}^m) shall be less than or equal to the PLANAR RADIAL PEAKING FACTORS (F_{xy}^c) used in the Core Operating Limit Supervisory System (COLSS) and in the Core Protection Calculators (CPC).

APPLICABILITY: MODE 1 above 20% of RATED THERMAL POWER.*

ACTION:

With a F_{xy}^m exceeding a corresponding F_{xy}^c , within 6 hours either:

- a. Adjust the CPC and COLSS addressable constants to increase the multiplier applied to PLANAR RADIAL PEAKING FACTORS to a factor greater than or equal to (F_{xy}^m/F_{xy}^c) ; or
- b. Adjust only the CPC addressable constants as in (a). Restrict subsequent operation so that a margin to the COLSS operating limits of at least $[(F_{xy}^m/F_{xy}^c) - 1.0] \times 100\%$ is maintained; or
- c. Adjust the affected PLANAR RADIAL PEAKING FACTORS (F_{xy}^c) used in the COLSS and CPC to a value greater than or equal to the measured PLANAR RADIAL PEAKING FACTORS (F_{xy}^m) or
- d. Be in at least HOT STANDBY.

SURVEILLANCE REQUIREMENTS

4.2.2.1 The provisions of Specification 4.0.4 are not applicable.

4.2.2.2 The measured PLANAR RADIAL PEAKING FACTORS (F_{xy}^m) obtained by using the incore detection system, shall be determined to be less than or equal to the PLANAR RADIAL PEAKING FACTORS (F_{xy}^c), used in the COLSS and CPC at the following intervals:

- a. After each fuel loading with THERMAL POWER greater than 40% but prior to operation above 70% of RATED THERMAL POWER, and
- b. At least once per 31 EFPD.

*See Special Test Exception 3.10.2.

3/4.2 POWER DISTRIBUTION LIMITS

BASES

3/4.2.1 LINEAR HEAT RATE

The limitation on linear heat rate ensures that in the event of a LOCA, the peak temperature of the fuel cladding will not exceed 2200°F.

Either of the two core power distribution monitoring systems, the Core Operating Limit Supervisory System (COLSS) and the Local Power Density channels in the Core Protection Calculators (CPCs), provide adequate monitoring of the core power distribution and are capable of verifying that the linear heat rate does not exceed its limits. The COLSS performs this function by continuously monitoring the core power distribution and calculating a core power operating limit corresponding to the allowable peak linear heat rate. Reactor operation at or below this calculated power level assures that the limits of 13.0 kw/ft are not exceeded.

The COLSS calculated core power and the COLSS calculated core power operating limits based on linear heat rate are continuously monitored and displayed to the operator. A COLSS alarm is annunciated in the event that the core power exceeds the core power operating limit. This provides adequate margin to the linear heat rate operating limit for normal steady state operation. Normal reactor power transients or equipment failures which do not require a reactor trip may result in this core power operating limit being exceeded. In the event this occurs, COLSS alarms will be annunciated. If the event which causes the COLSS limit to be exceeded results in conditions which approach the core safety limits, a reactor trip will be initiated by the Reactor Protective Instrumentation. The COLSS calculation of the linear heat rate includes appropriate penalty factors which provide, with a 95/95 probability/confidence level, that the maximum linear heat rate calculated by COLSS is conservative with respect to the actual maximum linear heat rate existing in the core. These penalty factors are determined from the uncertainties associated with planar radial peaking measurement, engineering design factors, axial densification, software algorithm modelling, computer processing, rod bow and core power measurement.

The core power distribution and a corresponding power operating limit based on Linear Heat Rate (LHR) are more accurately determined by the COLSS using the incore detector system. The CPCs determine LHR less accurately with the excore detectors. When COLSS is not available the TS LCOs are more restrictive due to the uncertainty of the CPCs. However, when COLSS becomes inoperable the added margin associated with CPC uncertainty is not immediately required and a 4 hour ACTION is provided for appropriate corrective action.

Parameters required to maintain the operating limit power level based on linear heat rate, margin to DNB and total core power are also monitored by the CPCs assuming minimum core power of 20% RATED THERMAL POWER. The 20% Rated Thermal Power threshold is due to the neutron flux detector system being inaccurate below 20% core power. Core noise level at low power is too large to obtain usable detector readings. Therefore, in the event that the COLSS is not being used, operation within the limits of Figure 3.2-2 can be maintained by utilizing a predetermined local power density margin and a total core power limit in the CPC trip channels. The above listed uncertainty penalty factors plus those associated with startup test acceptance criteria are also included in the CPCs.

3/4.2 POWER DISTRIBUTION LIMITS

BASES

3/4.2.1 LINEAR HEAT RATE (Continued)

While operating with the COLSS out of service, the CPC calculated LHR is monitored every 15 minutes to identify any adverse trend in thermal margin. The increased monitoring of LHR during the 4 hour action period ensures that adequate safety margin is maintained for anticipated operational occurrences and no postulated accident results in consequences more severe than those described in Chapter 15 of the UFSAR.



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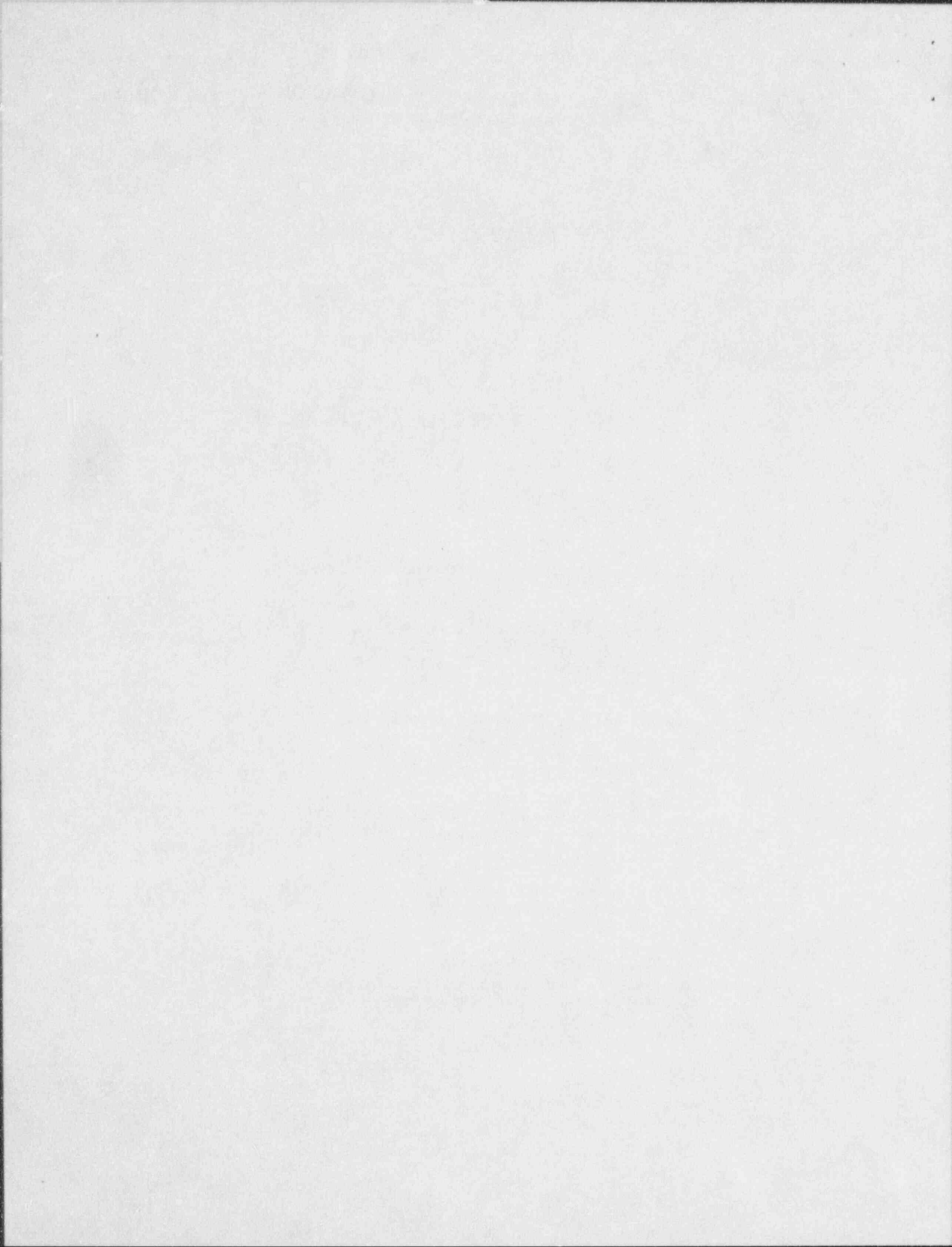
SOUTHERN CALIFORNIA EDISON COMPANY
SAN DIEGO GAS AND ELECTRIC COMPANY
THE CITY OF RIVERSIDE, CALIFORNIA
THE CITY OF ANAHEIM, CALIFORNIA

DOCKET NO. 50-362

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NO. 3
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 113
License No. NPF-15

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Southern California Edison Company, et al. (SCE or the licensee) dated September 16, 1994, 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;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;
and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.



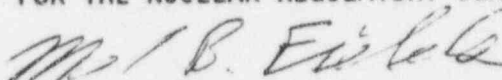
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-15 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 113, are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance to be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Mel B. Fields, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: August 23, 1995

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 113 TO FACILITY OPERATING LICENSE NO. NPF-15

DOCKET NO. 50-362

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by Amendment number and contain marginal lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE

3/4 2-1
B 3/4 2-1

INSERT

3/4 2-1
B 3/4 2-1

3/4.2 POWER DISTRIBUTION LIMITS

3/4.2.1 LINEAR HEAT RATE

LIMITING CONDITION FOR OPERATION

3.2.1 The linear heat rate shall not exceed 13.0 kw/ft.

APPLICABILITY: MODE 1 above 20% of RATED THERMAL POWER.

ACTION:

- a. With COLSS in service and the linear heat rate not being maintained as indicated by COLSS calculated core power exceeding the COLSS calculated core power operating limit based on linear heat rate (kw/ft):
 1. Restore the linear heat rate to within its limits within 1 hour, or
 2. Reduce THERMAL POWER to less than or equal to 20% of RATED THERMAL POWER within the next 6 hours.
- b. With COLSS not in service and the linear heat rate not being maintained as indicated by any OPERABLE Local Power Density channel exceeding the linear heat rate limit:
 1. Within 15 minutes initiate surveillance requirement 4.2.1.3 and restore the linear heat rate to within limits within 4 hours, or
 2. Reduce THERMAL POWER to less than or equal to 20% of RATED THERMAL POWER within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.2.1.1 The provisions of Specification 4.0.4 are not applicable.

4.2.1.2 The linear heat rate shall be determined to be within its limits when THERMAL POWER is above 20% of RATED THERMAL POWER by continuously monitoring the core power distribution with the Core Operating Limit Supervisory System (COLSS) or, with the COLSS out of service, by verifying at least once per 2 hours that the linear heat rate, as indicated on all OPERABLE Local Power Density channels, is within the limit of 13.0 kw/ft.

4.2.1.3 With COLSS not in service and the linear heat rate not being maintained as indicated by any OPERABLE Local Power Density Channel exceeding the linear heat rate limit, verify every 15 minutes that there is no adverse trend in the linear heat rate.

4.2.1.4 At least once per 31 days, the COLSS Margin Alarm shall be verified to actuate at a THERMAL POWER level less than or equal to the core power operating limit based on kw/ft.

POWER DISTRIBUTION LIMITS

3/4.2.2 PLANAR RADIAL PEAKING FACTORS - F_{xy}

LIMITING CONDITION FOR OPERATION

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APPLICABILITY: MODE 1 above 20% of RATED THERMAL Power.*

ACTION:

With a F_{xy}^m exceeding a corresponding F_{xy}^c , within 6 hours either:

- a. Adjust the CPC and COLSS addressable constants to increase the multiplier applied to PLANAR RADIAL PEAKING FACTORS to a factor greater than or equal to (F_{xy}^m/F_{xy}^c); or
- b. Adjust only the CPC addressable constants as in (a). Restrict subsequent operation so that a margin to the COLSS operating limits of at least $[(F_{xy}^m/F_{xy}^c) - 1.0] \times 100\%$ is maintained; or
- c. Adjust the affected PLANAR RADIAL PEAKING FACTORS (F_{xy}^c) used in the COLSS and CPC to a value greater than or equal to the measured PLANAR RADIAL PEAKING FACTORS (F_{xy}^m) or
- d. Be in at least HOT STANDBY.

SURVEILLANCE REQUIREMENTS

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4.2.2.2 The measured PLANAR RADIAL PEAKING FACTORS (F_{xy}^m) obtained by using the incore detection system, shall be determined to be less than or equal to the PLANAR RADIAL PEAKING FACTORS (F_{xy}^c), used in the COLSS and CPC at the following intervals:

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- b. At least once per 31 EFPD.

* See Special Test Exception 3.10.2.

3/4.2 POWER DISTRIBUTION LIMITS

BASES

3/4.2.1 LINEAR HEAT RATE

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3/4.2 POWER DISTRIBUTION LIMITS

BASES

3/4.2.1 LINEAR HEAT RATE (Continued)

While operating with the COLSS out of service, the CPC calculated LHR is monitored every 15 minutes to identify any adverse trend in thermal margin. The increased monitoring of LHR during the 4 hour action period ensures that adequate safety margin is maintained for anticipated operational occurrences and no postulated accident results in consequences more severe than those described in Chapter 15 of the UFSAR.