

NOV 29 1985

Docket Nos.: 50-275
and 50-323

Mr. J. D. Shiffer, Vice President
Nuclear Power Generation
c/o Nuclear Power Generation, Licensing
Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94016

Dear Mr. Shiffer:

Subject: Diablo Canyon Nuclear Power Plant - Issuance of Amendment No. 3 to
Facility Operating License No. DPR-80 (Unit 1) and Amendment No. 1
to Facility Operating License No. DPR-82 (Unit 2)

The Commission has issued the subject license amendments for the Diablo Canyon Nuclear Power Plant, located in San Luis Obispo County, California. Both amendments revise the combined Technical Specifications for Units 1 and 2 in the same manner concerning the axial flux difference limits for Unit 1 and Unit 2. The revised specifications will implement relaxed axial offset control (RAOC) for Unit 1 after a burnup of 8000 MWD/MTU in Cycle 1 has been reached in Unit 1 and will retain the existing axial offset control for Unit 2. It is our understanding that you are evaluating if a similar change in Technical Specifications is appropriate for Unit 2. Similar analyses will be performed for both units for future fuel cycles.

These amendments are in response to your letter of September 6, 1985 (LAR-85-09). A copy of the staff Safety Evaluation supporting both amendments is enclosed.

Sincerely,

Steven A. Varga, Director
PWR Project Directorate No. 3
Division of PWR Licensing-A

Enclosures:

1. Amendment No. 3 to
Facility Operating License DPR-80
2. Amendment No. 1 to
Facility Operating License DPR-82
3. Safety Evaluation

cc: See next page

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11/13/85	11/13/85	11/25/85

DPWRL-B:PAD3
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Diablo Canyon

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

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON NUCLEAR POWER PLANT, UNIT 1
DOCKET NO. 50-275
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 3
License No. DPR-80

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment dated September 6, 1985 (LAR 85-09) by Pacific Gas & Electric Company (the licensee) 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 1;
 - B. The facility will operate in conformity with the application, as amended, 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 a change to the combined Technical Specifications for Units 1 and 2 as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-80 is hereby amended to read as follows:


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P PDR

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 3, and the Environmental Protection Plan contained in Appendix B are hereby incorporated in the license. PG&E shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment becomes effective when Unit 1 reaches a burnup of 8000 MWD/MTU.

FOR THE NUCLEAR REGULATORY COMMISSION


Steven A. Varga, Director
PWR Project Directorate No. 3
Division of PWR Licensing-A

Attachment:
Changes to the Technical
Specifications

Date of Issuance: NOV 9 1995

- 3 -

ATTACHMENT TO LICENSE AMENDMENT NOS. 3 AND 1
FACILITY OPERATING LICENSE NOS. DPR-80 AND DPR-82
DOCKET NOS. 50-275 AND 50-323, RESPECTIVELY

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by Amendment Number and contain vertical lines indicating the area of change.

Amendment Pages

3/4 2-1
3/4 2-1a
3/4 2-1b
3/4 2-2
3/4 2-3
3/4 2-4
B 3/4 2-1
B 3/4 2-2
B 3/4 2-4
B 3/4 2-5
B 3/4 2-6



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

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON NUCLEAR POWER PLANT, UNIT 2
DOCKET NO. 50-323
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 1
License No. DPR-82

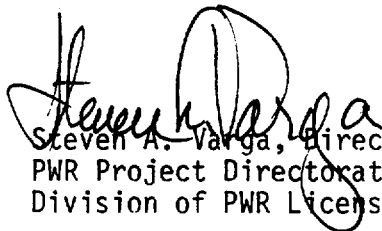
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment dated September 6, 1985 (LAR 85-09) by Pacific Gas & Electric Company (the licensee) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter 1;
 - B. The facility will operate in conformity with the application, as amended, 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 a change to the combined Technical Specifications for Units 1 and 2 as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-82 is hereby amended to read as follows:

(2) Technical Specifications (SSER 32, Section 8)* and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 1, and the Environmental Protection Plan contained in Appendix B are hereby incorporated in this license. PG&E shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment becomes effective when Unit 1 reaches a burnup of 8000 MWD/MTU.

FOR THE NUCLEAR REGULATORY COMMISSION



Steven A. Varga, Director
PWR Project Directorate No. 3
Division of PWR Licensing-A

Attachment:
Changes to the Technical
Specifications

Date of Issuance: NOV 29 1985

- 3 -

ATTACHMENT TO LICENSE AMENDMENT NOS. 3 AND 1
FACILITY OPERATING LICENSE NOS. DPR-80 AND DPR-82
DOCKET NOS. 50-275 AND 50-323, RESPECTIVELY

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by Amendment Number and contain vertical lines indicating the area of change.

Amendment Pages

3/4 2-1
3/4 2-1a
3/4 2-1b
3/4 2-2
3/4 2-3
3/4 2-4
B 3/4 2-1
B 3/4 2-2
B 3/4 2-4
B 3/4 2-5
B 3/4 2-6

3/4.2 POWER DISTRIBUTION LIMITS

3/4.2.1 AXIAL FLUX DIFFERENCE

LIMITING CONDITIONS FOR OPERATION

3.2.1.1 For Unit 1 the indicated AXIAL FLUX DIFFERENCE (AFD) shall be maintained within the allowed operational space defined by Unit 1 Figure 3.2-1a.

APPLICABILITY: For Unit 1 MODE 1 ABOVE 50 PERCENT RATED THERMAL POWER*.

ACTION:

- a. With the indicated AXIAL FLUX DIFFERENCE outside of the Unit 1 Figure 3.2-1a limits,
 1. Either restore the indicated AFD to within the Unit 1 Figure 3.2-1a limits within 15 minutes, or
 2. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 30 minutes and reduce the Power Range Neutron Flux - High Trip setpoints to less than or equal to 55 percent of RATED THERMAL POWER within the next 4 hours.
- b. THERMAL POWER shall not be increased above 50% of RATED THERMAL POWER unless the indicated AFD is within the Unit 1 Figure 3.2-1a limits.

SURVEILLANCE REQUIREMENTS

4.2.1.1.1 For Unit 1 the indicated AXIAL FLUX DIFFERENCE shall be determined to be within its limits during POWER OPERATION above 50 percent of RATED THERMAL POWER by:

- a. Monitoring the indicated AFD for each OPERABLE excore channel:
 1. At least once per 7 days when the AFD Monitor Alarm is OPERABLE, and
 2. At least once per hour for the first 24 hours after restoring the AFD Monitor Alarm to OPERABLE status.
- b. Monitoring and logging the indicated AXIAL FLUX DIFFERENCE for each OPERABLE excore channel at least once per hour for the first 24 hours and at least once per 30 minutes thereafter, when the AXIAL FLUX DIFFERENCE Monitor Alarm is inoperable. The logged values of the indicated AXIAL FLUX DIFFERENCE shall be assumed to exist during the interval preceding each logging.

4.2.1.1.2 For Unit 1 the indicated AFD shall be considered outside of its limits when at least 2 OPERABLE excore channels are indicating the AFD to be outside the limits.

*See Special Test Exceptions Specification 3.10.2

UNIT 1

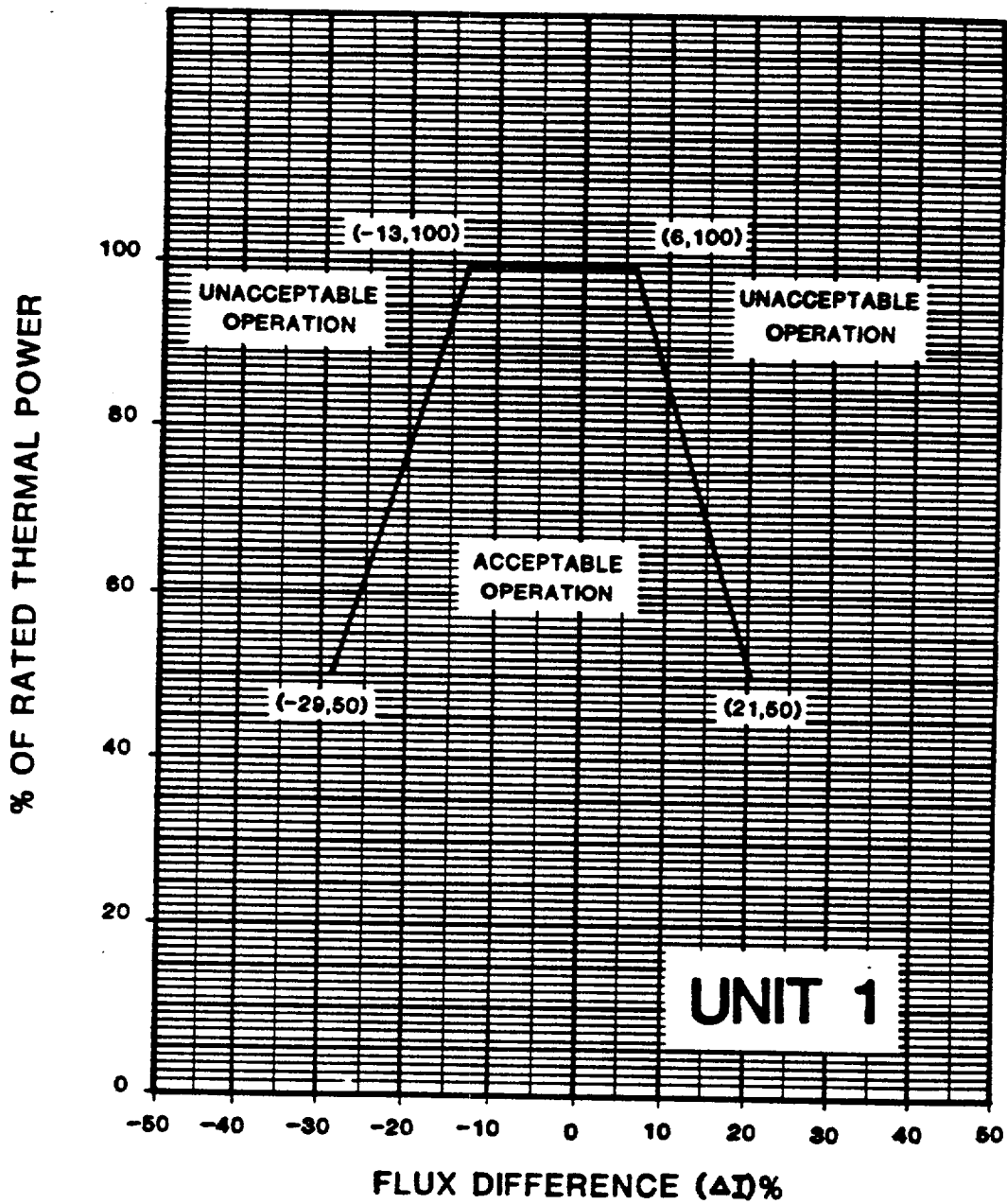


FIGURE 3.2-1a

UNIT 1 AXIAL FLUX DIFFERENCE LIMITS
AS A FUNCTION OF RATED THERMAL POWER

3/4.2 POWER DISTRIBUTION LIMITS

3/4.2.1 AXIAL FLUX DIFFERENCE

LIMITING CONDITION FOR OPERATION

3.2.1.1 For Unit 2 the indicated AXIAL FLUX DIFFERENCE (AFD) shall be maintained within a $\pm 5\%$ target band (flux difference units) about the target flux difference when THERMAL POWER is above 50% of RATED THERMAL POWER. The indicated AFD may deviate outside the above required target based at greater than or equal to 50% but less than 90% of RATED THERMAL POWER provided the indicated AFD is within the Acceptable Operation Limits of Unit 2 Figure 3.2-1b and the cumulative penalty deviation time does not exceed 1 hour during the previous 24 hours.

The indicated AFD may deviate outside the above required target band at greater than 15% but less than 50% of RATED THERMAL POWER provided the cumulative penalty deviation time does not exceed 1 hour during the previous 24 hours.

APPLICABILITY: For Unit 2 MODE 1 above 15% of RATED THERMAL POWER*.

ACTION:

- a. With the indicated AFD outside of the $\pm 5\%$ target band and with THERMAL POWER greater than or equal to 90% of RATED THERMAL POWER, within 15 minutes, either:
 1. Restore the indicated AFD to within the target band limits, or
 2. Reduce THERMAL POWER to less than 90% of RATED THERMAL POWER.
- b. With the indicated AFD outside of the above required target band for more than 1 hour of cumulative penalty deviation time during the previous 24 hours or outside the Acceptable Operation Limits of Unit 2 Figure 3.2-1b and with THERMAL POWER less than 90% but equal to or greater than 50% of RATED THERMAL POWER, reduce:
 1. THERMAL POWER to less than 50% of RATED THERMAL POWER within 30 minutes, and
 2. The Power Range Neutron Flux - High# Setpoints to less than or equal to 55% of RATED THERMAL POWER within the next 4 hours.

*See Special Test Exceptions Specification 3.10.2

#Surveillance testing of the Power Range Neutron Flux channel may be performed pursuant to Specification 4.3.1.1 provided the indicated AFD is maintained within the Acceptable Operation Limits of Unit 2 Figure 3.2-1b. A total of 16 hours operation may be accumulated with the AFD outside of the above required target band during testing without penalty deviation.

POWER DISTRIBUTION LIMITS

LIMITING CONDITION FOR OPERATION

ACTION (Continued)

- c. With the indicated AFD outside of the above required target band for more than 1 hour of cumulative penalty deviation time during the previous 24 hours and with THERMAL POWER less than 50% but greater than 15% of RATED THERMAL POWER, the THERMAL POWER shall not be increased equal to or greater than 50% of RATED THERMAL POWER until the indicated AFD is within the above required target band.

SURVEILLANCE REQUIREMENTS

4.2.1.2.1 For Unit 2 the indicated AFD shall be determined to be within its limits during POWER OPERATION above 15% of RATED THERMAL POWER by:

- a. Monitoring the indicated AFD for each OPERABLE excore channel:
 - 1) At least once per 7 days when the AFD Monitor Alarm is OPERABLE, and
 - 2) At least once per hour for the first 24 hours after restoring the AFD Monitor Alarm to OPERABLE status.
- b. Monitoring and logging the indicated AFD for each OPERABLE excore channel at least once per hour for the first 24 hours and at least once per 30 minutes thereafter, when the AFD Monitor Alarm is inoperable. The logged values of the indicated AFD shall be assumed to exist during the interval preceding each logging.

4.2.1.2.2 For Unit 2 the indicated AFD shall be considered outside of its + 5% target band when two or more OPERABLE excore channels are indicating the AFD to be outside the target band. Penalty deviation outside of the \pm 5% target band shall be accumulated on a time basis of:

- a. One minute penalty deviation for each 1 minute of POWER OPERATION outside of the target band at THERMAL POWER levels equal to or above 50% of RATED THERMAL POWER, and
- b. One-half minute penalty deviation for each 1 minute of POWER OPERATION outside of the target band at THERMAL POWER levels between 15% and 50% of RATED THERMAL POWER.

POWER DISTRIBUTION LIMITS

SURVEILLANCE REQUIREMENTS (Continued)

4.2.1.2.3 For Unit 2 the target flux difference of each OPERABLE excore channel shall be determined by measurement at least once per 92 Effective Full Power Days. The provisions of Specification 4.0.4 are not applicable.

4.2.1.2.4 For Unit 2 the target flux difference shall be updated at least once per 31 Effective Full Power Days by either determining the target flux difference pursuant to Specification 4.2.1.3 above or by linear interpolation between the most recently measured value and 0% at the end of the cycle life. The provisions of Specification 4.0.4 are not applicable.

UNIT 2

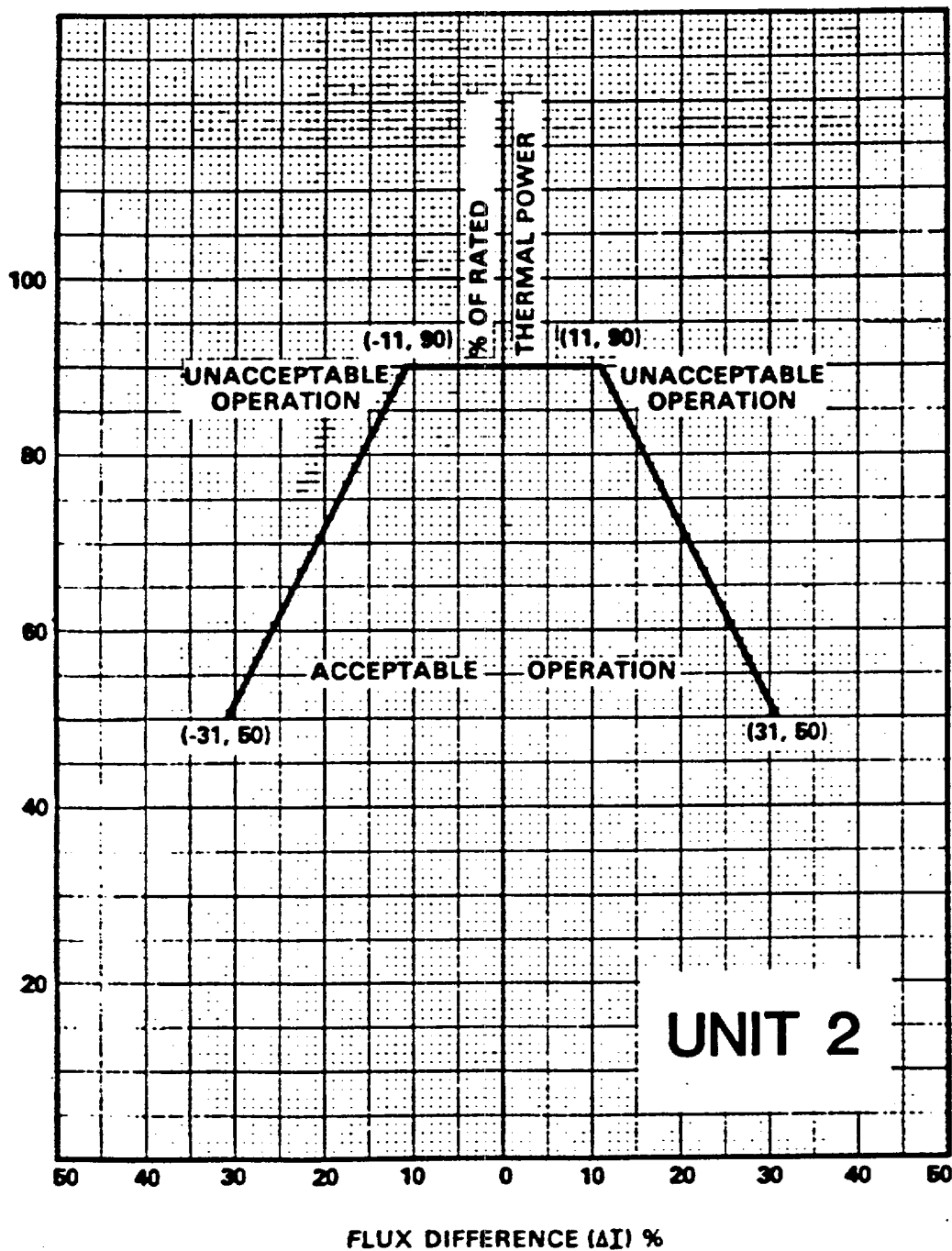


FIGURE 3.2-1b
UNIT 2 AXIAL FLUX DIFFERENCE LIMITS AS A
FUNCTION OF RATED THERMAL POWER

3/4.2 POWER DISTRIBUTION LIMITS

BASES

The specifications of this section provide assurance of fuel integrity during Condition I (Normal Operation) and II (Incidents of Moderate Frequency) events by: (a) maintaining the minimum DNBR in the core greater than or equal to 1.30 during normal operation and in short term transients, and (b) limiting the fission gas release, fuel pellet temperature and cladding mechanical properties to within assumed design criteria. In addition, limiting the peak linear power density during Condition I events provides assurance that the initial conditions assumed for the LOCA analyses are met and the ECCS acceptance criteria limit of 2200°F is not exceeded.

The definitions of certain hot channel and peaking factors as used in these specifications are as follows:

$F_Q(Z)$ Heat Flux Hot Channel Factor, is defined as the maximum local heat flux on the surface of a fuel rod at core elevation Z divided by the average fuel rod heat flux, allowing for manufacturing tolerances on fuel pellets and rods;

$F_{\Delta H}^N$ Nuclear Enthalpy Rise Hot Channel Factor, is defined as the ratio of the integral of linear power along the rod with the highest integrated power to the average rod power; and

$F_{xy}(Z)$ Radial Peaking Factor, is defined as the ratio of peak power density to average power density in the horizontal plane at core elevation Z .

3/4.2.1 AXIAL FLUX DIFFERENCE

UNIT 1:

The limits on AXIAL FLUX DIFFERENCE assure that the $F_Q(Z)$ upper bound envelope of F_Q^{limit} times the normalized axial peaking factor is not exceeded during either normal operation or in the event of xenon redistribution following power changes.

Provisions for monitoring the AFD on an automatic basis are derived from the plant process computer through the AFD Monitor Alarm. The computer determines the one minute average of each of the OPERABLE excore detector outputs and provides an alarm message immediately if the AFD for at least 2 of 4 or 2 of 3 OPERABLE excore channels are outside the AFD limits and the THERMAL POWER is greater than 50 percent of RATED THERMAL POWER.

UNIT 2:

The limits on AXIAL FLUX DIFFERENCE (AFD) assure that the $F_Q(Z)$ upper bound envelope of 2.32 times the normalized axial peaking factor is not exceeded during either normal operation or in the event of xenon redistribution following power changes.

POWER DISTRIBUTION LIMITS

BASES

AXIAL FLUX DIFFERENCE (Continued)

Target flux difference is determined at equilibrium xenon conditions. The full-length rods may be positioned within the core in accordance with their respective insertion limits and should be inserted near their normal position for steady state operation at high power levels. The value of the target flux difference obtained under these conditions divided by the fraction of RATED THERMAL POWER is the target flux difference at RATED THERMAL POWER for the associated core burnup conditions. Target flux differences for other THERMAL POWER levels are obtained by multiplying the RATED THERMAL POWER value by the appropriate fractional THERMAL POWER level. The periodic updating of the target flux difference value is necessary to reflect core burnup considerations.

Although it is intended that the plant will be operated with the AFD within the +5% target band about the target flux difference, during rapid plant THERMAL POWER changes, control rod motion will cause the AFD to deviate outside of the target band. This deviation will not affect the xenon redistribution sufficiently to change the envelope of peaking factors which may be reached subsequently (with the AFD within the target band) provided the time duration of the deviation is limited. Accordingly, a 1 hour penalty deviation limit cumulative during the previous 24 hours is provided for operation outside of the target band but within the limits of Unit 2 Figure 3.2-1b while at THERMAL POWER levels between 50% and 90% of RATED THERMAL POWER. For THERMAL POWER levels between 15% and 50% of rated THERMAL POWER, deviations of the AFD outside of the target band are less significant. The penalty of 2 hours actual time reflects this reduced significance.

Provisions for monitoring the AFD on an automatic basis are derived from the plant process computer through the AFD Monitor Alarm. The computer determines the one minute average of each of the OPERABLE excore detector outputs and provides an alarm message immediately if the AFD for 2 or more OPERABLE excore channels are outside the target band and the THERMAL POWER is greater than 90% of RATED THERMAL POWER. During operation at THERMAL POWER levels between 50% and 90% and between 15% and 50% RATED THERMAL POWER, the computer outputs an alarm message when the penalty deviation accumulates beyond the limits of 1 hour and 2 hours, respectively.

Figure B 3/4 2-1 shows a typical monthly target band.

3/4.2.2 and 3/4.2.3 HEAT FLUX HOT CHANNEL FACTOR, and RCS FLOWRATE AND NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR

The limits on Heat Flux Hot Channel Factor, RCS Flowrate, and Nuclear Enthalpy Rise Hot Channel Factor ensure that: (1) the design limits on peak local power density and minimum DNBR are not exceeded, and (2) in the event of a LOCA the peak fuel clad temperature will not exceed the 2200°F ECCS acceptance criteria limit.

POWER DISTRIBUTION LIMITS

BASES

HEAT FLUX HOT CHANNEL FACTOR, and RCS FLOWRATE AND NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR (Continued)

Each of these is measurable but will normally only be determined periodically as specified in Specifications 4.2.2 and 4.2.3. This periodic surveillance is sufficient to ensure that the limits are maintained provided:

1. Control rods in a single group move together with no individual rod insertion differing by more than ± 12 steps, indicated, from the group demand position,
2. Control rod groups are sequenced with overlapping groups as described in Specification 3.1.3.6,
3. The control rod insertion limits of Specifications 3.1.3.5 and 3.1.3.6 are maintained, and
4. The axial power distribution, expressed in terms of AXIAL FLUX DIFFERENCE, is maintained within the limits.

$F_{\Delta H}^N$ will be maintained within its limits provided Conditions 1. through 4., above, are maintained. As noted on Figure 3.2-3a and Figure 3.2-3b, RCS flow rate and $F_{\Delta H}^N$ may be "traded off" against one another (i.e., a low measured RCS flow rate is acceptable if the measured $F_{\Delta H}^N$ is also low) to ensure that the calculated DNBR will not be below the design DNBR value. The relaxation of $F_{\Delta H}^N$ as a function of THERMAL POWER allows changes in the radial power shape for all permissible rod insertion limits.

R, as calculated per Specification 3.2.3 and used in Figure 3.2-3a and Figure 3.2-3b accounts for $F_{\Delta H}^N$ less than or equal to 1.49. This value is the value used in the various accident analyses where $F_{\Delta H}^N$ influences parameters other than DNBR, e.g., peak clad temperature, and thus is the maximum "as measured" value allowed. Thus, knowing the "as measured" values of $F_{\Delta H}^N$ and RCS flow allows for "trade offs" in excess of R equal to 1 for the purpose of offsetting the rod bow DNBR penalty.

Fuel rod bowing reduces the value of DNB ratio. Credit is available to offset this reduction in the generic margin. The generic margin totaling 9.1% DNBR is derived from the difference between the design and required values on the following items: (a) design DNBR limit, (b) grid spacing multiplier, (c) thermal diffusion coefficient, (d) DNBR spacer factor multiplier and (e) pitch reduction. The rod bow penalty is calculated with the method described in WCAP-8691, Revision 1, and is completely compensated by the available margin of 9.1%.

POWER DISTRIBUTION LIMITS

BASES

HEAT FLUX HOT CHANNEL FACTOR, and RCS FLOWRATE and NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR (Continued)

When an F_Q measurement is taken, an allowance for both experimental error and manufacturing tolerance must be made. An allowance of 5% is appropriate for a full core map taken with the incore detector flux mapping system and a 3% allowance is appropriate for manufacturing tolerance.

When RCS flow rate and $F_{\Delta H}^N$ are measured, no additional allowances are necessary prior to comparison with the limits of Figures 3.2-3. Measurement errors of 3.5% for RCS total flow rate and 4% for $F_{\Delta H}^N$ have been allowed for in determination of the design DNBR value.

The 12-hour periodic surveillance of indicated RCS flow is sufficient to detect only flow degradation which could lead to operation outside the acceptable region of operation shown on Figure 3.2-3a and Figure 3.2-3b.

The Radial Peaking Factor, $F_{xy}(Z)$, is measured periodically to provide additional assurance that the Hot Channel Factor, $F_Q(Z)$, remains within its limit. The F_{xy} limit for RATED THERMAL POWER (F_{xy}^{RTP}) as provided in the Radial Peaking Factor Limit Report per Specification 6.9.1.8 was determined from expected power control maneuvers over the full range of burnup conditions in the core.

3/4.2.4 QUADRANT POWER TILT RATIO

The QUADRANT POWER TILT RATIO limit assures that the radial power distribution satisfies the design values used in the power capability analysis. Radial power distribution measurements are made during startup testing and periodically during power operation.

The limit of 1.02 at which corrective action is required provides DNB and linear heat generation rate protection with x-y plane power tilts. The limit of 1.02 was selected to provide an allowance for the uncertainty associated with the indicated power tilt.

The 2-hour time allowance for operation with a tilt condition greater than 1.02 but less than 1.09 is provided to allow identification and correction of a dropped or misaligned rod. In the event such action does not correct the tilt, the margin for uncertainty on F_Q is reinstated by reducing the power by 3% for each percent of tilt in excess of 1.

POWER DISTRIBUTION LIMITS

BASES

3/4.2.5 DNB PARAMETERS

The limits on the DNB-related parameters assure that each of the parameters are maintained within the normal steady-state envelope of operation assumed in the transient and safety analyses. The limits are consistent with the initial FSAR assumptions and have been analytically demonstrated adequate to maintain a minimum DNBR of 1.30 throughout each analyzed transient.

The 12-hour periodic surveillance of these parameters through instrument readout is sufficient to ensure that the parameters are restored within their limits following load changes and other expected transient operation.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR
REACTOR REGULATION RELATED TO
AMENDMENT NO. 3 TO FACILITY OPERATING LICENSE NO. DPR-80
DIABLO CANYON UNIT 1, DOCKET NO. 275; AND
AMENDMENT NO. 1 TO FACILITY OPERATING LICENSE NO. DPR-82,
DIABLO CANYON UNIT 2, DOCKET NO. 50-323

INTRODUCTION

By letter dated September 6, 1985, (LAR 85-09) Pacific Gas and Electric Company (PG&E) requested changes to the Diablo Canyon Units 1 and 2 combined Technical Specification 3/4.2.1, "Axial Flux Difference". The changes would implement a Westinghouse developed power distribution control methodology called Relaxed Axial Offset Control (RAOC) for Diablo Canyon Unit 1 and would retain the existing Technical Specifications for Unit 2. The changes require an amendment to the Technical Specifications for both Unit 1 and Unit 2.

EVALUATION

Westinghouse reactors have for a number of years operated under a power distribution control system called Constant Axial Offset Control (CAOC), which ensures peaking factors will remain below values assumed as input for accident analyses during normal operation of the power plant. Basically CAOC achieves its result by requiring plant operation within a 15% flux difference (± 1) around a measured target value. By controlling the axial power distribution, the possible skewing of the axial xenon distribution is limited, thus minimizing xenon oscillations and their effects on the power distribution.

Plants have varying degrees of margin to the peaking factor limits which can be supported by CAOC. Westinghouse developed the RAOC to directly determine the allowed band of ± 1 operation required to support any plant specific peaking factor limit. The staff approved RAOC for referencing in licensing actions in a letter from C. Thomas (NRC), to E. P. Rahe (W) "Acceptance for Referencing of Licensing Topical Report WCAP-10216(P) (NS-EPR-2649)," dated February 28, 1983.

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The staff has reviewed the Technical Specification changes proposed by PG&E for Diablo Canyon Unit 1 and finds they correctly implement RAOC. Since this represents the application of an approved methodology, the proposed Technical Specification changes are acceptable. As described by PG&E, the analysis, which applies to Diablo Canyon Unit 1 is applicable only after the unit reaches 8000 MWD/MTU burnup in Cycle 1 and thereafter until the end of Cycle 1. Specific evaluations for subsequent cycles must be made to determine if the allowable ΔI band curve remains valid or if further revisions are required by an additional Technical Specification change.

In addition to implementation of RAOC for Unit 1, the proposed changes also modify the existing Technical Specification 3/4.2.1 to remain applicable for Unit 2 only. This is an administrative change and is therefore acceptable also.

CONTACT WITH STATE OFFICIAL

The NRC staff has advised the Chief of the Radiological Health Branch, State Department of Health Services, State of California, of the proposed determination of no significant hazards consideration. No comments were received.

ENVIRONMENTAL CONSIDERATION

These amendments involve changes in operating administrative procedures. The staff has determined that the amendments do not involve any increase in the amounts of any effluents that may be released offsite and that there is no increase in the individual or cumulative occupation radiation exposure.

The Commission has previously issued proposed findings that the amendments involve no significant hazards consideration, and there has been no public comment on such findings. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (10). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

CONCLUSION

Based upon its evaluation of the proposed changes to the Diablo Canyon Units 1 and 2 combined Technical Specifications, the staff has concluded 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 regulation, and (3) the issuance of these amendments will not be inimical to the common defense and security or the health and safety of the public.

Dated: NOV 29 1985

November 2, 1985

DIABLO CANYON NUCLEAR POWER PLANT - ISSUANCE OF AMENDMENT NO. 3 TO FACILITY OPERATING LICENSE NO. DPR-80 (UNIT 1) AND AMENDMENT NO. 1 TO FACILITY OPERATING LICENSE NO. DPR-82 (UNIT 2)

DISTRIBUTION

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