

ATTACHMENT A

NIAGARA MOHAWK POWER CORPORATION

LICENSE NO. DPR-63

DOCKET NO. 50-220

Proposed Changes to Technical Specifications (Appendix A)

Replace pages 64a and 70 with the attached revised pages. These pages have been retyped in their entirety. The changes are indicated by marginal markings.

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LIMITING CONDITION FOR OPERATION

SURVEILLANCE REQUIREMENT

c. Minimum Critical Power Ratio (MCPR)

During power operation, the MCPR for all 8 x 8 fuel at rated power and flow shall be as shown in the table below:

LIMITING CONDITION FOR OPERATING MCPR

<u>Core Average Incremental Exposure</u>	<u>Limiting MCPR*</u>
BOC to EOC minus 2 GWD/ST	≥ 1.40
EOC minus 2 GWD/ST to EOC minus 1 GWD/ST	≥ 1.45
EOC minus 1 GWD/ST to EOC	≥ 1.50

If at any time during power operation it is determined by normal surveillance that these limits are no longer met, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If all the operating MCPRs are not returned to within the prescribed limits within two (2) hours, reactor power reductions shall be initiated at a rate not less than 10% per hour until MCPR is within the prescribed limits.

For core flows other than rated the MCPR limits shall be the limits identified above times K_f where K_f is as shown in Figure 3.1.7-1.

d. Power Flow Relationship During Operation

The power/flow relationship shall not exceed the limiting values shown in Figure 3.1.7.aa.

*These limits shall be determined to be applicable each operating cycle by analyses performed utilizing the ODYN transient code.

c. Minimum Critical Power Ratio (MCPR)

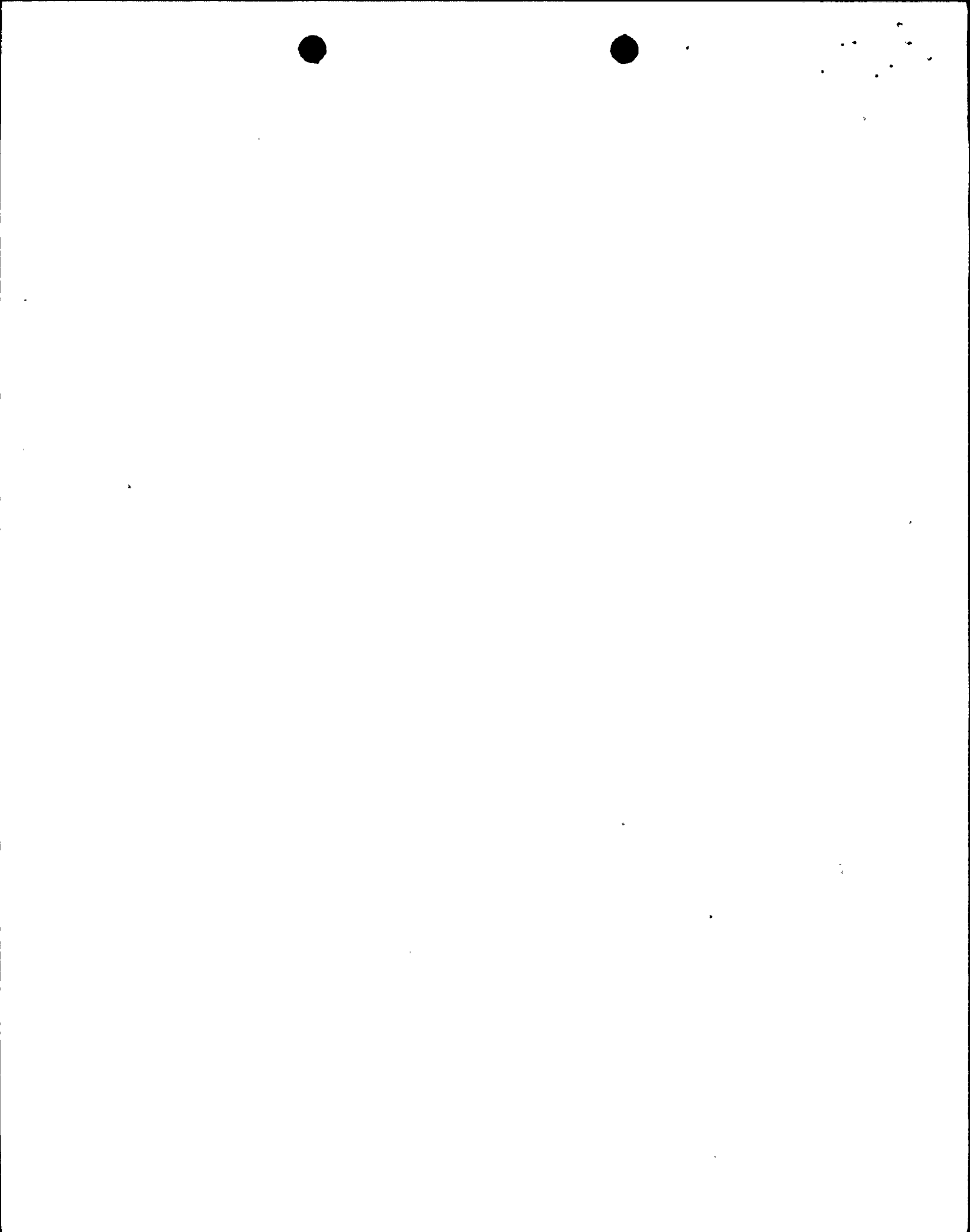
MCPR shall be determined daily during reactor power operation at >25% rated thermal power.

d. Power Flow Relationship

Compliance with the power flow relationship in Section 3.1.7.d shall be determined daily during reactor operation.

e. Partial Loop Operation

Under partial loop operation, surveillance requirements 4.1.7.a,b,c, and d above are applicable.



BASES FOR 3.1.7 AND 4.1.7 FUEL RODS

Average Planar Linear Heat Generation Rate (ALPHGR)

This specification assures that the peak cladding temperature and the peak local cladding oxidation following the postulated design basis loss-of-coolant accident will not exceed the limits specified in 10CFR50, Appendix K.

The peak cladding temperature following a postulated loss-of-coolant accident is primarily a function of the average heat generation rate of all the rods of a fuel assembly at any axial location and is only dependent secondarily on the rod-to-rod power distribution within an assembly. Since expected local variations in power distribution within a fuel assembly affect the calculated peak clad temperature by less than + 20 F relative to the peak temperature for a typical fuel design, the limit on the average linear heat generation rate is sufficient to assure that calculated temperatures are within the 10CFR50, Appendix K limit. The limiting value for APLHGR is shown in Figure 3.1.7. These curves are based on calculations using the models described in References 1, 2, 3, 5, 6 and 13.

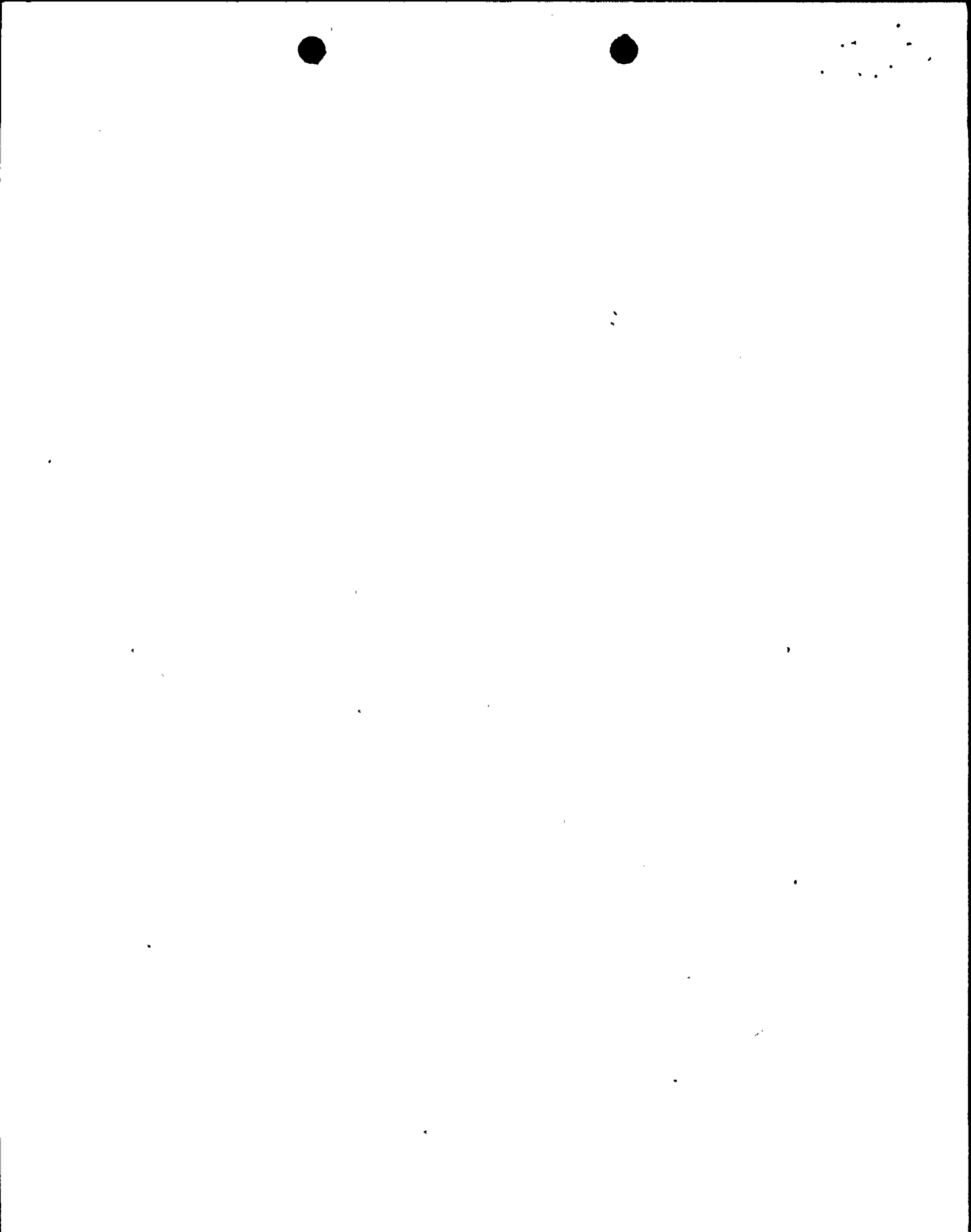
The Reference 13 LOCA analysis is sensitive to minimum critical power ratio (MCPR). In that analysis MCPR values of 1.30 for 5 loop operation and 1.36 for 4 and 3 loop operation, were assumed. If future transient analyses should yield a MCPR limit below either of these values the Reference 13 LOCA analysis MCPR value would become limiting. The current MCPR limit is ≥ 1.40 .

Linear Heat Generation Rate (LHGR)

This specification assures that the linear heat generation rate in any rod is less than the design linear heat generation even if fuel pellet densification is postulated (Reference 12). The LHGR shall be checked daily during reactor operation at $\geq 25\%$ power to determine if fuel burnup or control rod movement has caused changes in power distribution.

Minimum Critical Power Ratio (MCPR)

At core thermal power levels less than or equal to 25%, the reactor will be operating at a minimum recirculation pump speed and the moderator void content will be very small. For all designated control rod patterns which may be employed at this point, operating plant experience and thermal-hydraulic analysis indicated that the resulting MCPR value is in excess of requirements by a considerable margin. With this low void content, any inadvertent core flow increase would only place operation in a more conservative mode relative to MCPR. During initial startup testing



ATTACHMENT B

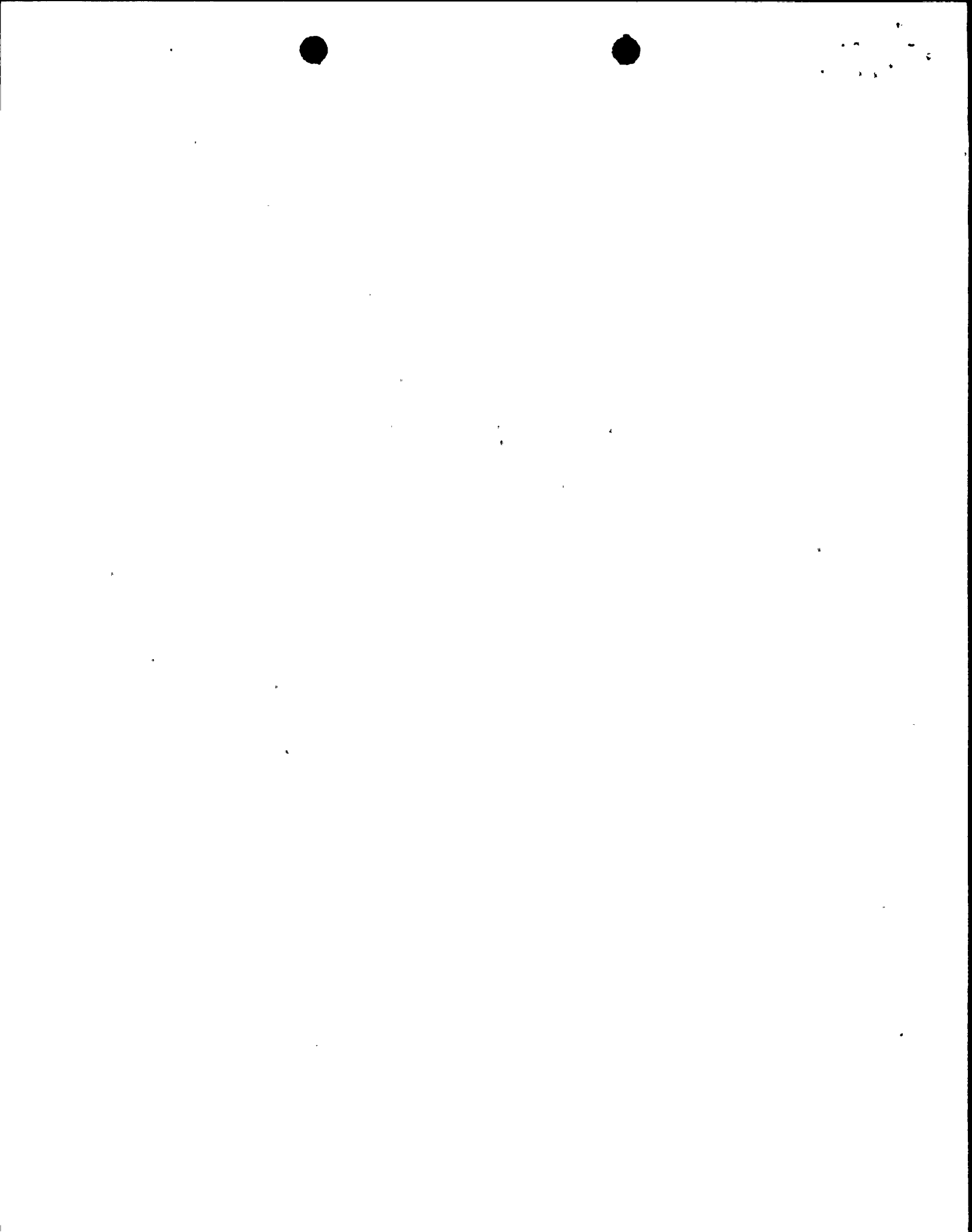
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Supporting Information

This revision changes the section of the Technical Specifications pertaining to limiting values of the Minimum Critical Power Ratio (MCPR). The limits have been changed in a conservative manner, i.e. they have been increased to values greater than the limits currently calculated. For each reload these limits will be verified by the ODYN computer code. The reason for this change is to establish limits which are sufficiently conservative and need not be corrected on a cycle by cycle basis for potential, small changes in analysis results.



ATTACHMENT C

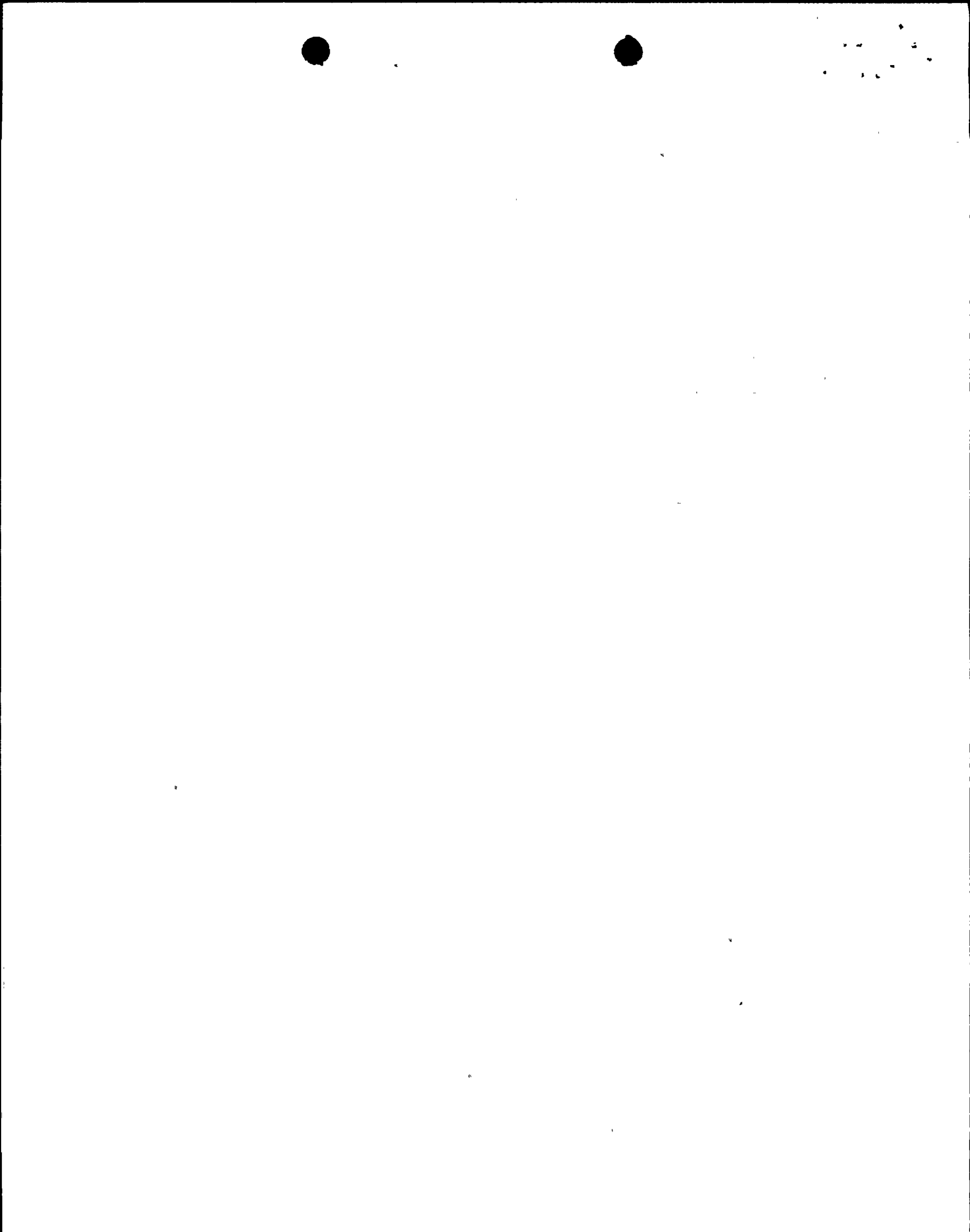
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Amendment Classification

This proposed amendment to the Operating License has been evaluated and determined to fall within the definition of Class II of 10CFR170.22 requiring a fee of \$1,200.



ATTACHMENT D

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No Significant Hazards Considerations Analysis

The proposed amendment increases the Minimum Critical Power Ratio (MCPR) limits. This is a conservative change. The Commission has provided guidance concerning the determination of significant hazards by providing certain examples (48FRI4870) of amendments considered not likely to involve significant hazards consideration. One of the examples relates to a change which constitutes an additional limitation, restriction or control not presently in the Technical Specifications. The proposed Technical Specification change is similar to this in that it imposes a greater restriction on operation. Another example is a change resulting from core reloading if no fuel assemblies significantly different from those found previously acceptable to the Nuclear Regulatory Commission are used. This example is applicable since the fuel to be loaded is of the same design as fuel used the previous cycle. The proposed Technical Specification change therefore involves no significant hazards consideration.

