

JUN 4 1970

Docket No. 50-237

Commonwealth Edison Company
P. O. Box 767
Chicago, Illinois 60690

Change No. 1
License No. DPR-19

Attention: Mr. Byron Lee, Jr.
Assistant to the President

Gentlemen:

We have reviewed your Proposed Change No. 1, dated May 22, 1970, requesting changes to Figure 1.1.1 and Section 1.1.B to the Technical Specifications of Provisional Operating License No. DPR-19. The proposed changes would extend the fuel cladding safety limit, based on a minimum critical heat flux ratio (MCHFR) of 1.0, to include the region of operation between 5% and 20% core coolant flow.

We have concluded that the proposed change does not present significant hazards considerations not described or implicit in the safety analysis report and that there is reasonable assurance that the health and safety of the public will not be endangered. A copy of the related Safety Evaluation, prepared by the AEC regulatory staff, is enclosed.

Accordingly, the following changes are made to the Technical Specifications (Appendix A) of Provisional Operating License No. DPR-19:

On page 6, line 3 of Specification 1.1.B, change "20% of design" to "5% of design."

On page 9, replace Figure 1.1.1 - Core Thermal Hydraulic Safety Limit - with the attached Figure 1.1.1 (Revision 1).

On page 14, lines 2 and 3 of the third paragraph, change "20%" to "5%."

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JUN 4 1970

On page 13, delete the third sentence of the first full paragraph and replace with: "The lower curve is based on a pressure of 1235 psig."

Sincerely yours,

Original Signed by Peter A. Morris

Peter A. Morris, Director Division of Reactor Licensing

Enclosures:

- 1. Safety Evaluation
2. Figure 1.1.1 (Revision 1)

cc: Arthur Gehr, Esquire
Isham, Lincoln & Beale
Counselors at Law
P. O. Box 767
Chicago, Illinois 60690

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Table with columns for OFFICE, SURNAME, and DATE, containing handwritten entries for DRL:BWR-2, OGC, and DRL.

SAFETY EVALUATION BY THE DIVISION OF REACTOR LICENSING

DOCKET NO. 50-237

COMMONWEALTH EDISON COMPANY

DRESDEN NUCLEAR POWER STATION UNIT 2

PROPOSED CHANGE NO. 1 TO TECHNICAL SPECIFICATIONS

INTRODUCTION

By Proposed Change No. 1 dated May 22, 1970, Commonwealth Edison Company proposed a change to the Dresden Nuclear Power Station Unit 2 Technical Specifications regarding the safety limit on fuel cladding integrity.

DISCUSSION

The safety limit on fuel cladding integrity for the Dresden 2 reactor is dependent on plant operating parameters including power level, coolant flow, pressure, water level and peaking factor. Operating below the region bounded by the safety limit curve shown in Figure 1.1.1 of the Technical Specifications assures that fuel failure would not occur during normal plant operation including anticipated transients.

The safety limit that defines the relationship of power-to-flow is given in two regions: (1) 20% flow and greater and (2) below 20% flow. The safety limit in the region of 20% flow and greater is based on the critical heat flux correlation given in APED-5286*. For core coolant flow below 20%, Section 1.1.B of the Technical Specifications states "When the reactor pressure is less than 600 psig or recirculation flow is less than 20 percent of design, the reactor thermal power-to-water shall not exceed 460 MWt." (460 MWt corresponds to approximately 20% power.) This portion of the safety limit was not determined on the basis of the critical heat flux correlation of APED-5286. However, it was chosen because it was expected that the natural circulation of the reactor coolant would be greater than 20% flow at 20% power. The proposed safety limit extension follows the same approach taken on the Oyster Creek facility where calculations and data indicated that natural circulation flow was less than had been expected.

EVALUATION

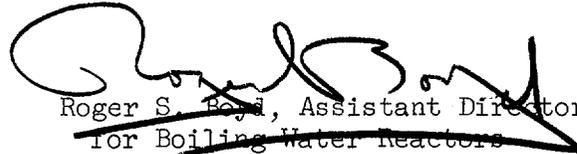
This change is similar to the change approved for the Oyster Creek Technical Specifications in Change Request No. 1, Provisional Operating License DPR-16, AEC Docket No. 50-219.

*Design Basis for Critical Heat Flux Condition in Boiling Water Reactors, General Electric Company, September 1966.

The basis for applying the critical heat flux correlation given in APED-5286 to the Dresden 2 reactor has already been established in the safety analysis report (SAR). The extension of the safety limit into the lower flow and power region on the basis of analysis and experimental data is preferable to the previous arbitrary limits on flow and power.

CONCLUSION

We have concluded that the proposed change does not present significant hazards considerations not described or implicit in the safety analysis report, and that there is reasonable assurance that the health and safety of the public will not be endangered.


Roger S. Boyd, Assistant Director
~~For Boiling Water Reactors~~
Division of Reactor Licensing

Date: June 4, 1970

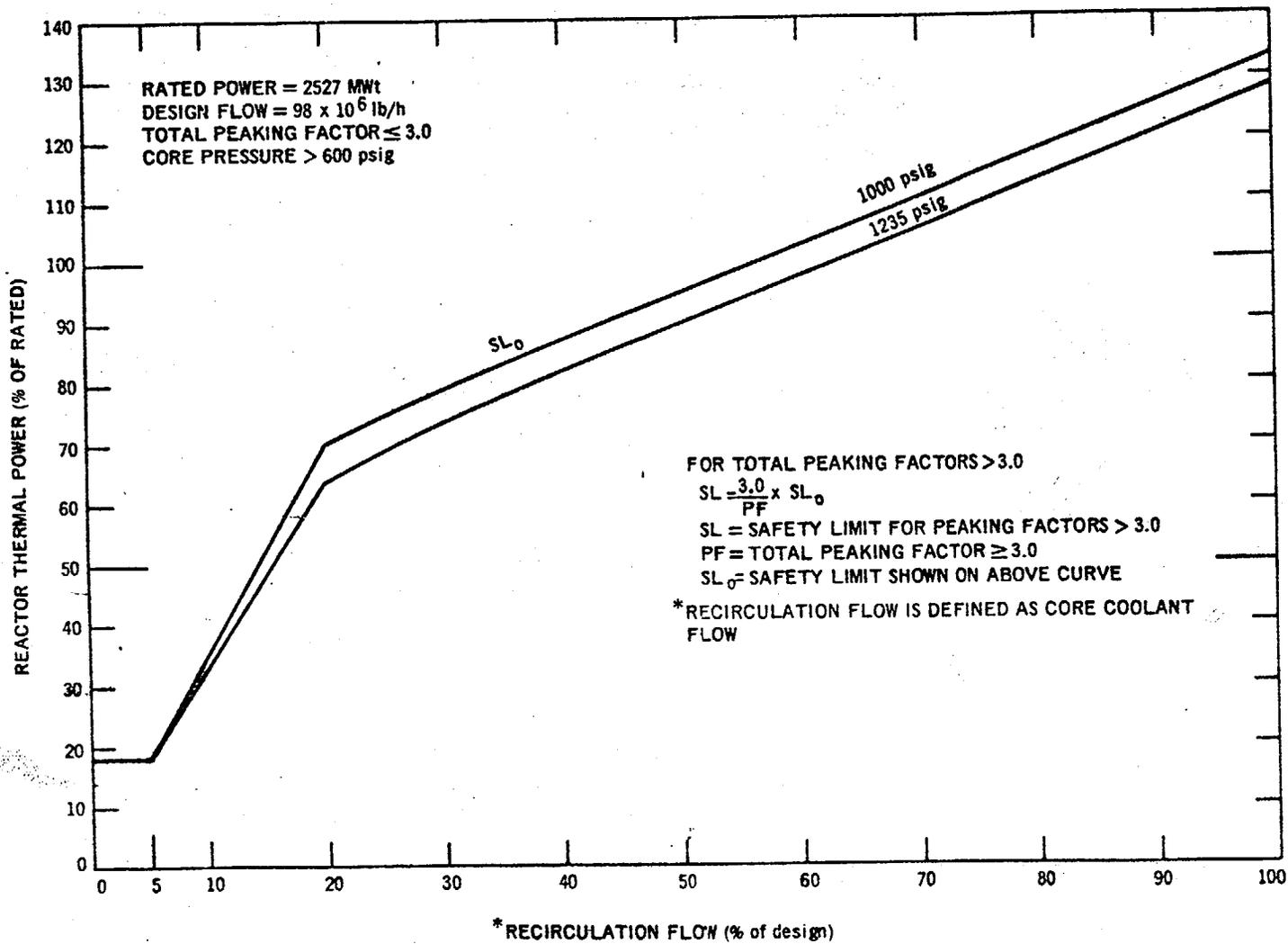


Figure 1.1.1 (Revision 1) Core Thermal Safety Limit