

October 28, 1986

Docket No. 50-254

Mr. Dennis L. Farrar
Director of Nuclear Licensing
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

Dear Mr. Farrar:

SUBJECT: MCPR LIMIT CHANGES IN THE TECHNICAL SPECIFICATIONS (TAC 62749)

Re: Quad Cities Nuclear Power Station, Unit 1

The Commission has issued the enclosed Amendment No. 97 to Facility Operating License No. DPR-29 for the Quad Cities Nuclear Power Station, Unit 1. The amendment is in response to your application dated August 26, 1986. This amendment revises minimum critical power ratio (MCPR) limits contained in the Technical Specifications, and deletes MCPR limits for fuel types no longer in use.

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

Sincerely,

Original signed by

John A. Zwolinski, Director
BWR Project Directorate #1
Division of BWR Licensing

Enclosures:

1. Amendment No. 97 to License No. DPR-29
2. Safety Evaluation

cc w/enclosures:
See next page

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Mr. Dennis L. Farrar
Commonwealth Edison Company

Quad Cities Nuclear Power Station
Units 1 and 2

cc:

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

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

DOCKET NO. 50-254

QUAD CITIES NUCLEAR POWER STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 97
License No. DPR-29

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated August 26, 1986, 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 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 3.B. of Facility Operating License No. DPR-29 is hereby amended to read as follows:

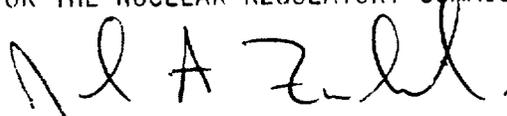
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B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 97, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION



John A. Zwolinski, Director
BWR Project Directorate #1
Division of BWR Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 28, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 97

FACILITY OPERATING LICENSE NO. DPR-29

DOCKET NO. 50-254

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE

3.5/4.5-10

INSERT

3.5/4.5-10

QUAD CITIES
DPR-29

within the prescribed limits within 2 hours, the reactor shall be brought to the cold shutdown condition within 36 hours. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits. Maximum allowable LHGR for all 8X8 fuel types is 13.4 KW/ft.

K. Minimum Critical Power Ratio (MCPR)

During steady-state operation at rated core flow, MCPR shall be greater than or equal to:

$$1.35 \text{ for } \tau_{\text{AVE}} \leq .73 \text{ sec}$$

$$1.40 \text{ for } \tau_{\text{AVE}} \geq .86 \text{ sec}$$

$$.385 \tau_{\text{AVE}} + 1.069$$

$$\text{for } .73 \text{ sec} \leq \tau_{\text{AVE}} \leq .86 \text{ sec}$$

K. Minimum Critical Power Ratio (MCPR)

The MCPR shall be determined daily during steady-state power operation above 25% of rated thermal power.

where τ_{ave} = mean 20% scram insertion time for all surveillance data from specification 4.3.C which has been generated in the current cycle.

For core flows other than rated, these nominal values of MCPR shall be increased by a factor of k_f , where k_f is as shown in Figure 3.5.2. If any time during operation it is determined by normal surveillance that the limiting value for MCPR is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If the steady-state MCPR is not returned to within the prescribed limits within 2 hours, the reactor shall be brought to the cold shutdown condition within 36 hours. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 97 TO FACILITY OPERATING LICENSE NO. DPR-29

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

QUAD CITIES NUCLEAR POWER STATION, UNIT 1

DOCKET NO. 50-254

1.0 INTRODUCTION

By letter dated August 26, 1986, Commonwealth Edison Company (CECo, the licensee) submitted a proposed Technical Specification (TS) change that would revise the minimum critical power ratio (MCPR) operating limit currently in the TS for Quad Cities Unit 1. The proposed change would also delete from the TS the MCPR limits for 8X8 and 8X8R fuels, which are fuel types that are no longer used in Unit 1.

2.0 EVALUATION

The licensee proposed to reduce the operating limit MCPR value from 1.39 to 1.35 in order to provide additional operating margin. After startup from Reload 8, it became apparent that the additional margin allowed by the Cycle 9-specific transient analysis might be needed later in the cycle, or derating might be necessary to not exceed the current TS limit of 1.39.

The General Electric (GE) reload fuel for the current Operating Cycle 9, and the supporting reload analyses, were previously reviewed and approved by the licensee under the provisions of 10 CFR 50.59. As part of that review, CECo determined that the existing TS MCPR operating limit of 1.39 for P8X8R fuel conservatively bounded the Cycle 9-specific value of 1.35. The Cycle 9-specific operating limit MCPR value was determined from a transient analysis performed using previously NRC staff-approved methodology. More specifically, the transient analysis demonstrates that the most limiting transient for Cycle 9 is the load rejection without bypass event, with an associated operating limit MCPR value of 1.35. The analysis was performed using ODYN Code, a methodology already approved by the NRC staff. By further application of the ODYN Code, MCPR limits for longer scram insertion times are based on surveillance data generated in the current operating cycle.

Since the analysis was performed using a previously approved methodology, and the proposed revised operating limit MCPR value is conservative with respect to the most limiting transient event, using the approved methodology, the proposed change in MCPR limit is acceptable.

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The licensee also proposed to delete MCPR limits from the TS for fuels no longer used in the core. Since these values do not apply to any fuel in the core as it is now constituted, this deletion is appropriate and is acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets 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 nor environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

The staff 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security nor to the health and safety of the public.

Principal Contributor: R. Bevan

Dated: October 28, 1986