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Docket No. 50-249

NOV 15 1976

Commonwealth Edison Company
ATTN: Mr. R. L. Bolger
Assistant Vice President
Post Office Box 767
Chicago, Illinois 60690

Gentlemen:

The Commission has issued the enclosed Amendment No. 24 to Facility Operating License No. DPR-25 for Unit No. 3 of the Dresden Nuclear Power Station.

This amendment corrects the MCPR limits issued by Amendment No. 23 to Facility Operating License No. DPR-25. The correction adds an interim restriction inadvertently omitted from Amendment No. 23. The correction was discussed with your staff on November 8, 1976.

Copies of the related Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

Original signed by
Dennis L. Ziemann

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosures:
1. Amendment No. 24 to License No. DPR-25
2. Safety Evaluation
3. Notice

cc w/enclosures:
See next page

OFFICE	DOR:ORB #2	DOR:ORB #2	DOR:RSB/OT	DOR:AD/OT	OELD	DOR:ORB #2
SURNAME	RMDiggs	RDSilver:ro	RBaer	DEisenhut	DSwanson	DLZiemann
DATE	11/10/76	11/10/76	11/12/76	11/14/76	11/12/76	11/15/76

Form AEC-318 (Rev. 9-53) AECM 0240

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Morris, Illinois 60451

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Federal Activities Branch
Region V Office
ATTN: EIS COORDINATOR
230 South Dearborn Street
Chicago, Illinois 60604

Mr. William Waters
Chairman, Board of Supervisors
of Grundy County
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Morris, Illinois 60450

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ATTN: Chief, Division of
Radiological Health
535 West Jefferson Street
Springfield, Illinois 62706

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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-249

DRESDEN UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 24
License No. DPR-25

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   B. 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;

   C. 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

   D. 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.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Dennis L. Ziemann

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 15, 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 24

FACILITY OPERATING LICENSE NO. DPR-25

DOCKET NO. 50-249

Replace the following pages of the Technical Specifications contained in Appendix A of the above-indicated license with the attached pages bearing the same numbers. The changed areas on the revised pages are reflected by a marginal line.

Remove Pages	Insert Pages
81D	81D
85B	85B

3.5 LIMITING CONDITION FOR OPERATION

K. Minimum Critical Power Ratio (MCPR)

During steady state operation, MCPR shall be greater than or equal to -

Unit 3

1.46 (7 x 7 fuel)

1.33 (8 x 8 fuel)

at rated power and flow. 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 at any time during steady state power operation, it is determined 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 two (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. For core flows other than rated, the MCPR shall be 1.32 times K_f where K_f is as shown in Figure 3.5-2.

4.5 SURVEILLANCE REQUIREMENTS

K. Minimum Critical Power Ratio (MCPR)

MCPR shall be determined daily during a reactor power operation at $\geq$ 25% rated thermal power and following any change in power level or distribution that would cause operation with a limiting control rod pattern as described in the bases for Specification 3.3.B.5.

81D

heat generation rate even if fuel pellet densification is postulated. The power spike penalty specified is based on that presented in Ref. (2) and assumes a linearly increasing variation in axial gaps between core bottom and top, and assumes with 95% confidence, that no more than one fuel rod exceeds the design LHGR due to power spiking. An irradiation growth factor of 0.25% was used as the basis for determining ΔP/P in accordance with Refs. (3) and (4).

K. Minimum Critical Power Ratio (MCPR)

The steady state values for MCPR specified in this Specification were selected to provide margin to accommodate transients and uncertainties in monitoring the core operating state as well as uncertainties in the critical power correlation itself. These values also assure that operation will be such that the initial condition assumed for the LOCA analysis, a MCPR of 1.18, is satisfied. For any of the special set of transients or disturbance caused by single operator error or single equipment malfunction, it is required that design analyses initialized at this steady state operating limit yield a MCPR of not less than that specified in Specification 1.1.A at any time during the transient assuming instrument trip settings given in Specification 2.1. For analysis of the thermal consequences of these transients, the limiting value of MCPR stated in this specification is conservatively assumed to exist prior to the initiation of the transients. The results apply with increased conservatism while operating with MCPR's greater than specified.

The most limiting transients with respect to MCPR are generally:

a) Rod withdrawal error

b) Turbine trip without bypass

c) Loss of feedwater heater

Several factors influence which of these transients results in the largest reduction in critical power ratio such as the specific fuel loading, exposure, and fuel type. The current cycles reload licensing submittal specifies the limiting transient for a given exposure increment for each fuel type. The values specified as the Limiting Condition of Operation are conservatively chosen as the most restrictive over the entire cycle for each fuel type. For Cycle 5, the operating limit has been increased by 0.07 over the limit based on transient analyses to assure that boiling transition would not occur in a misloaded fuel bundle during steady state operation.

For core flow rates less than rated, the steady state MCPR is increased by the formula given in the Specification. This assure that the MCPR will be maintained greater than that specified in Specification 1.1.A even in the event that the motor-generator set speed controller causes the scoop tube positioner for the fluid coupler to move to the maximum speed position.

(2) Fuel Densification Effects on General on General Electric Boiling Water Reactor Fuel," Section 3.2.1, Supplement 6, Aug. 1973.

(3) USAEC Report, "Supplement 1 to the Technical Report on Densification of General Electric Reactor Fuels," Dec. 14, 1973.

(4) GE Planning and Development Memorandum #45, "Length Growth of BWR Fuel Elements", R. A. Proebsthe, October 1, 1973 (Proprietary).

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 24 TO FACILITY OPERATING LICENSE NO. DPR-25

COMMONWEALTH EDISON COMPANY

DRESDEN UNIT NO. 3

DOCKET NO. 50-249

On November 4, 1976, Amendment No. 23 to Facility Operating License No. DPR-25 for Dresden Unit No. 3 was issued. That amendment authorized operation with additional 8 x 8 assemblies and incorporated revised MCPR limits in response to plant specific analyses for Reload 4. The amendment added interim restrictions on operating MCPRs such that a fuel loading error could not result in steady state operation with a MCPR less than the safety limit of 1.06. The amendment should have applied interim restrictions to both 7 x 7 and 8 x 8 assemblies until such time that analyses are completed which could provide the basis for relaxation of the restrictions. Amendment No. 23 inadvertently applied the interim restriction to 8 x 8 assemblies only. The restriction should be applied to core locations designated for 7 x 7 fuel assemblies because it is the mislocation of an 8 x 8 assembly into a position designated for a 7 x 7 assembly which would constitute the worst case fuel loading error for Dresden Unit No. 3. This interim restriction which increases the operating limit MCPR for 7 x 7 fuel to 1.46 is consistent with the analyses presented in support of Amendment No. 23 and provides acceptable assurance that the safety limit MCPR of 1.06 will not be violated during steady state operation even if the worse misloading error should occur. This revision to amendment No. 23 was discussed with representatives of Commonwealth Edison on November 8, 1976, and they agreed with the revision.

ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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 or to the health and safety of the public.

Date: November 15, 1976

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-249

COMMONWEALTH EDISON COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 24 to Facility Operating License No. DPR-25, issued to Commonwealth Edison Company (the licensee), which revised Technical Specifications for operation of the Dresden Nuclear Power Station Unit No. 1 (the facility) located in Grundy County, Illinois. The amendment is effective as of its date of issuance.

The amendment incorporated a correction to the MCPR limits issued by Amendment No. 23 to Facility Operating License No. DPR-25. The correction adds an interim restriction inadvertently omitted from Amendment No. 23.

The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR 51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) Amendment No. 23 to License No. DPR-25 issued November 4, 1976 and a related Safety Evaluation of the same date, and (2) Amendment No. 24 to License No. DPR-25 and the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Morris Public Library, 604 Liberty Street, Morris, Illinois 60451. A single copy of items (1) and (2) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 15th day of November, 1976.

FOR THE NUCLEAR REGULATORY COMMISSION

Dennis L. Ziemann

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors