

NOV 07 1975

Docket No. 50-237
50-249

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

Centlemen:

The Commission has requested the Federal Register to publish the enclosed Notice of Proposed Issuance of Amendments to Facility License Nos. NEB-19 and EEP-25 for the Dresden Nuclear Power Station Units 2 and 3. The proposed amendments include a change to the Technical Specifications based on our letter to you dated September 4, 1975. It is our understanding that the change proposed in our letter of September 4, 1975, is acceptable to you.

These amendments would revise the Technical Specifications to (1) add requirements that would limit the period of tire operation can be continued with inmovable control rods that could have control rod drive mechanism collet housing failures and (2) require increased control rod surveillance when the possibility of a control rod drive mechanism collet housing failure exists.

Copies of our proposed license amendments with proposed changes to the Technical Specifications also are enclosed. A copy of our Safety Evaluation relating to this proposed action was forwarded to you with our letter dated September 4, 1975.

Sincerely,

Original Signed by:
Dennis L. Ziemann

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

Enclosures:

1. Federal Register Notice
2. Proposed Amendments w/Proposed Technical Specification changes

Copy

Deleting additional provisions per communication with Folger (3rd para - which are set forth in the proposed license amendments)

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|-----------|------------|----------|-----------|-----------|--|--|
| OFFICE ➤ | DRM:ORB 2 | RL:ORB 2 | OELD | DEL:ORB 2 | | |
| SURNAME ➤ | RMDiggs:ah | RSilver | D Swanson | DZiemann | | |
| DATE ➤ | 10-22-75 | 10-24-75 | 10-26-75 | 10-7-75 | | |

NOV 07 1975

cc w/enclosures:

John W. Rowe, Esquire
Isham, Lincoln & Beale
Counselors at Law
One First National Plaza
Chicago, Illinois 60670

Anthony Z. Roisman, Esquire
Berlin, Roisman and Kessler
1712 N Street, N. W.
Washington, D. C. 20036

Morris Public Library
604 Liberty Street
Morris, Illinois 60451

cc w/enclosures & cy of NRC 9/4/75
Ltr. to CEC & SER:

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

Mr. Leroy Stratton
Bureau of Radiological Health
Illinois Department of Public Health
Springfield, Illinois 62706

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(Share this page)

any person whose interest may be affected by this proceeding may file a request for a hearing in the form of a petition for leave to intervene

DEC 17 1975

the licensee may file a request for a hearing and

DEFB
C. Smith
per

~~set forth in the proposed license amendments as amended (the Act) and the Commission's rules and regulations which are~~

will have made the findings required by the Atomic Energy Act of 1954, Prior to issuance of the proposed license amendments, the Commission

exists.

when the possibility of a control rod drive mechanism collet housing failure collet housing failures and (2) require increased control rod surveillance with irremovable control rods that could have control rod drive mechanism requirements that would limit the period of time operation can be continued These amendments would revise the Technical Specifications to (1) add

Grundy County, Illinois.

Breden Nuclear Power Station Units 2 and 3 (the facilities) located in issued to Commonwealth Edison Company (the licensee) for operation of the issuance of amendments to Facility Operating License Nos. DFP-19 and DFP-25 The U. S. Nuclear Regulatory Commission (the Commission) is considering

NOTICE OF PROPOSED ISSUANCE OF AMENDMENTS TO FACILITY OPERATING LICENSES

COMMONWEALTH EDISON COMPANY

PERMIT NOS. 50-237 AND 50-249

UNITED STATES NUCLEAR REGULATORY COMMISSION

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|---------|--|--|--|--|--|
| DATE | | | | | |
| SURNAME | | | | | |
| OFFICE | | | | | |

jurisdiction will be denied.
 Petitions stating contentions relating only to matters outside the Commission's

contentions with regard to each aspect on which intervention is requested.

facts on which the petitioner relies as to both his interest and his

as to which intervention is desired and specifies with particularity the

affidavit which identifies the specific aspect or aspects of the proceeding

A petition for leave to intervene must be accompanied by a supporting

60670, the attorney for the licensee.

and Reale, Counselors at Law, One First National Plaza, Chicago, Illinois

Washington, D. C. 20555, and to Mr. John W. Fowe, Esquire, Isham, Lincoln

be sent to the Executive Legal Director, U. S. Nuclear Regulatory Commission,

the above date. A copy of the petition and/or request for a hearing should

Washington, D. C. 20555, Attention: Docketing and Service Section, by

Secretary of the Commission, U. S. Nuclear Regulatory Commission,

FEDERAL REGISTER notice and Section 2.714, and must be filed with the

Such petitions must be filed in accordance with the provisions of this

the petitioner's contentions with respect to the proposed licensing action.

how that interest may be affected by the results of the proceeding, and

intervene must set forth the interest of the petitioner in the proceeding,

10 CFR Part 2 of the Commission's regulations. A petition for leave to

oath or affirmation in accordance with the provisions of Section 2.714 of

operating licenses. Petitions for leave to intervene must be filed under

with respect to the issuance of these amendments to the subject facility

| DATE | SURNAME | OFFICE |
|----------|----------------|-----------|
| 10-22-75 | RM [Signature] | RT:ORB 2 |
| 10-24-75 | RSilver | RD:ORB #2 |
| 10-28-75 | D. Swanson | BELO |
| 11-7-75 | DIZIEMANN | RT:ORB |

Dennis L. Ziemann
 Chief
 Operating Factors Branch #2
 U.S. Nuclear Regulatory Commission

Handwritten notes:
 Best part of 3rd para. which is...
 2 + 1/2 + 1/2

Original Signed by: Dennis L. Ziemann

Dated at Bethesda, Maryland,

Attention: Director, Division of Reactor Licensing, addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, may be inspected at the above locations and a copy may be obtained upon request.

Morris, Illinois 60451. These license amendments and the Safety Evaluation Washington, D. C. and at the Morris Public Library, 604 Liberty Street, inspection at the Commission's Public Document Room, 1717 R Street, N. W., Commission's staff dated September 4, 1975, which are available for public attached proposed Technical Specifications and the Safety Evaluation by the letter to Commonwealth Edison Company dated September 4, 1975, and the

For further details with respect to these actions, see the Commission's present evidence and examine and cross-examine witnesses.

participate fully in the conduct of the hearing. For example, he may intervene, he becomes a party to the proceeding and has a right to

In the event that a hearing is held and a person is permitted to regarding the disposition of the petitions.

whether a hearing should be noticed or another appropriate order issued Licensing Board Panel. Timely petitions will be considered to determine designated by the Commission or by the Chairman of the Atomic Safety and All petitions will be acted upon by the Commission or Licensing Board,

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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-237

DRESDEN NUCLEAR POWER STATION UNIT 2

PROPOSED AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.
License No. DPR-19

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. 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; and
 - B. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 3.B of Facility License No. DPR-19 is hereby amended to read as follows:
 - "B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. ."
3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Karl R. Goller, Assistant Director
for Operating Reactors
Division of Reactor Licensing

Attachment:
Change No. to the
Technical Specifications

Date of Issuance:

ATTACHMENT TO PROPOSED LICENSE AMENDMENT
PROPOSED CHANGE TO THE TECHNICAL SPECIFICATIONS
PROVISIONAL OPERATING LICENSE NO. DPR-19

DOCKET NO. 50-237

Delete existing pages 54 and 62 of the Technical Specifications and insert the attached revised pages 54 and 62. The changed areas on the revised pages are shown by marginal lines.

3.3 LIMITING CONDITION FOR OPERATION

REACTIVITY CONTROL

Applicability:

Applies to the operational status of the control rod system.

Objective:

To assure the ability of the control rod system to control reactivity.

Specification:

A. Reactivity Limitations

1. Reactivity margin - core loading

The core loading shall be limited to that which can be made subcritical in the most reactive condition during the operating cycle with the strongest operable control rod in its full-out position and all other operable rods fully inserted.

2. Reactivity margin - inoperable control rods

- a. Control rod drives which cannot be moved with control rod drive pressure shall be considered inoperable. If a partially or fully withdrawn control rod drive cannot be moved with drive or scram pressure the reactor shall be brought to a shutdown condition within 48 hours unless investigation demonstrates that the cause of the failure is not due to a failed control rod drive mechanism collet housing.

4.3 SURVEILLANCE REQUIREMENT

4.3 REACTIVITY CONTROL

Applicability:

Applies to the surveillance requirements of the control rod system.

Objective:

To verify the ability of the control rod system to control reactivity.

Specification:

A. Reactivity Limitations

1. Reactivity margin - core loading

Sufficient control rods shall be withdrawn following a refueling outage when core alterations were performed to demonstrate with a margin of 0.25 percent Δk that the core can be made subcritical at any time in the subsequent fuel cycle with the strongest operable control rod fully withdrawn and all other operable rods fully inserted.

2. Reactivity margin - inoperable control rods

Each partially or fully withdrawn operable control rod shall be exercised one notch at least once each week. This test shall be performed at least once per 24 hours in the event power operation is continuing with three or more inoperable control rods or in the event power operation is continuing with one fully or partially withdrawn rod which cannot be moved and for which control rod drive mechanism damage has not been ruled out. The surveillance need not be completed within 24 hours if the number of inoperable rods has been reduced to less than three and if it has been demonstrated that control rod drive mechanism collet housing failure is not the cause of an immovable control rod.

indicative of a generic control rod drive problem and the reactor will be shutdown.

Also if damage within the control rod drive mechanism and in particular, cracks in drive internal housings, cannot be ruled out, then a generic problem affecting a number of drives cannot be ruled out. Circumferential cracks resulting from stress assisted intergranular corrosion have occurred in the collet housing of drives at several BWRs. This type of cracking could occur in a number of drives and if the cracks propagated until severance of the collet housing occurred, scram could be prevented in the affected rods. Limiting the period of operation with a potentially severed collet housing and requiring increased surveillance after detecting one stuck rod will assure that the reactor will not be operated with a large number of rods with failed collet housings.

B. Control Rod Withdrawal

1. Control rod dropout accidents as discussed in the SAR can lead to significant core damage. If coupling integrity is maintained, the possibility of a rod dropout accident is eliminated. The overtravel position feature provides a positive check as only uncoupled drives may reach this position. Neutron instrumentation response to rod movement provides a verification that the rod is following its drive. Absence of such response to drive movement would indicate an uncoupled condition.
2. The control rod housing support restricts the outward movement of a control rod to less than 3 inches in the extremely remote event of a housing failure. The amount of reactivity which could be added by this

small amount of rod withdrawal, which is less than a normal single withdrawal increment, will not contribute to any damage to the primary coolant system. The design basis is given in Section 6.6.1 of the SAR, and the design evaluation is given in Section 6.6.3. This support is not required if the reactor coolant system is at atmospheric pressure since there would then be no driving force to rapidly eject a drive housing. Additionally, the support is not required if all control rods are fully inserted and if an adequate shutdown margin with one control rod withdrawn has been demonstrated since the reactor would remain subcritical even in the event of complete ejection of the strongest control rod.

3. Control rod withdrawal and insertion sequences are established to assure that the maximum insequence individual control rod or control rod segments which are withdrawn could not be worth enough to cause the core to be more than 0.013 delta K supercritical if they were to drop out of the core in the manner defined for the Rod Drop Accident.⁽³⁾ These sequences are developed prior to initial operation of the unit following any refueling outage and the requirement that an operator follow these sequences is backed up by the operation of the RWM. This 0.013 delta K limit, together with the integral rod velocity limiters and the action of the control rod drive system, limit potential reactivity insertion such that the results of a control rod drop accident will not exceed a maximum fuel energy content of 280 cal/gm. The peak fuel enthalpy of 280 cal/gm is below the energy content at which rapid fuel dispersal and primary system damage have been found to occur based on experimental data as is discussed in Reference 1.

The analysis of the control rod drop accident was originally presented in Sections 7.9.3, 14.2.1.2 and 14.2.1.4 of the Safety Analysis Report. Improvements in analytical capability have allowed a more refined analysis of the control rod drop accident.

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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-249

DRESDEN NUCLEAR POWER STATION UNIT 3

PROPOSED AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.
License No. DPR-25

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. 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; and
 - B. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 3.B of Facility License No. DPR-25 is hereby amended to read as follows:

"B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. ."

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

FOR THE NUCLEAR REGULATORY COMMISSION

Karl R. Goller, Assistant Director
for Operating Reactors
Division of Reactor Licensing

Attachment:
Change No. to the
Technical Specifications

Date of Issuance:

ATTACHMENT TO PROPOSED LICENSE AMENDMENT
PROPOSED CHANGE TO THE TECHNICAL SPECIFICATIONS
FACILITY OPERATING LICENSE NO. DPR-25
DOCKET NO. 50-249

Delete existing pages 54 and 62 of the Technical Specifications and insert the attached revised pages 54 and 62. The changed areas on the revised pages are shown by marginal lines.

3.3 LIMITING CONDITION FOR OPERATION

REACTIVITY CONTROL

Applicability:

Applies to the operational status of the control rod system.

Objective:

To assure the ability of the control rod system to control reactivity.

Specification:

A. Reactivity Limitations

1. Reactivity margin - core loading

The core loading shall be limited to that which can be made subcritical in the most reactive condition during the operating cycle with the strongest operable control rod in its full-out position and all other operable rods fully inserted.

2. Reactivity margin - inoperable control rods

- a. Control rod drives which cannot be moved with control rod drive pressure shall be considered inoperable. If a partially or fully withdrawn control rod drive cannot be moved with drive or scram pressure the reactor shall be brought to a shutdown condition within 48 hours unless investigation demonstrates that the cause of the failure is not due to a failed control rod drive mechanism collet housing.

4.3 SURVEILLANCE REQUIREMENT

4.3 REACTIVITY CONTROL

Applicability:

Applies to the surveillance requirements of the control rod system.

Objective:

To verify the ability of the control rod system to control reactivity.

Specification:

A. Reactivity Limitations

1. Reactivity margin - core loading

Sufficient control rods shall be withdrawn following a refueling outage when core alterations were performed to demonstrate with a margin of 0.25 percent Δk that the core can be made subcritical at any time in the subsequent fuel cycle with the strongest operable control rod fully withdrawn and all other operable rods fully inserted.

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B. Control Rod Withdrawal

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3. Control rod withdrawal and insertion sequences are established to assure that the maximum insequence individual control rod or control rod segments which are withdrawn could not be worth enough to cause the core to be more than 0.013 delta K supercritical if they were to drop out of the core in the manner defined for the Rod Drop Accident.⁽³⁾ These sequences are developed prior to initial operation of the unit following any refueling outage and the requirement that an operator follow these sequences is backed up by the operation of the RWM. This 0.013 delta K limit, together with the integral rod velocity limiters and the action of the control rod drive system, limit potential reactivity insertion such that the results of a control rod drop accident will not exceed a maximum fuel energy content of 280 cal/gm. The peak fuel enthalpy of 280 cal/gm is below the energy content at which rapid fuel dispersal and primary system damage have been found to occur based on experimental data as is discussed in Reference 1.

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