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Docket Nos. 50-254
50-265

DEC 09 1975

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

Gentlemen:

The Commission has requested the Federal Register to publish the enclosed Notice of Proposed Issuance of Amendments to Facility License Nos. DPR-29 and DPR-30 for the Quad-Cities Nuclear Power Station Units 1 and 2. The proposed amendments include a change to the Technical Specifications based on our letter to you dated September 22, 1975. It is our understanding that you do not object to the proposed changes.

These amendments would revise the Technical Specifications to (1) add requirements that would limit the period of time operation can be continued with inoperable control rods that could have control rod drive ceramic 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 relative to this proposed action was forwarded to you with our letter dated September 22, 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

CONCUR

OFFICE ▶	RL:ORB #2	RL:ORB #2	OELD	RL:ORB#2		
SURNAME ▶	RMDiggs:ah	PWO'Connor	DSwanson	DLZiemann		
DATE ▶	11/20/75	11/20/75	11/04/75	12/09/75		

Form AEC-318 (Rev. 9-53) AECM 0240 ☆ U.S. GOVERNMENT PRINTING OFFICE: 1974 — 555-338

cc w/enclosures:
Mr. Charles Whitmore
President and Chairman
Iowa-Illinois Gas and
Electric Company
206 East Second Avenue
Davenport, Iowa 52801

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

Moline Public Library
504 - 17th Street
Moline, Illinois 61265

cc w/enclosures and cy of NRC's
9/22/75 ltr. to CECo w/SER:
Mr. Robert W. Watts, Chairman
Rock Island County Board
of Supervisors
Rock Island County Court House
Rock Island, Illinois 61201

cc w/enclosures and cy of NRC's
9/22/75 ltr. to CECo w/SER
and CECo's ltr. dtd. 10/8/75:
Mr. Leroy Stratton
Bureau of Radiological Health
Illinois Department of Public Health
Springfield, Illinois 62706

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 50-254 AND 50-265

COMMONWEALTH EDISON COMPANY
AND
IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

NOTICE OF PROPOSED ISSUANCE OF AMENDMENTS
TO FACILITY OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of amendments to Facility Operating License Nos. DPR-29 and DPR-30 issued to Commonwealth Edison Company (acting for itself and on behalf of the Iowa-Illinois Gas and Electric Company) for operation of the Quad-Cities Station Units 1 and 2 (the facilities) located in Rock Island County, Illinois.

These amendments would revise the Technical Specifications to (1) add requirements that would limit the period of time operation can be continued with immovable 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.

Prior to issuance of the proposed license amendments, the Commission will have made the findings required by the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations.

By January 12, 1976 , the licensee may file a request for a hearing and 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

with respect to the issuance of these amendments to the subject facility operating licenses. Petitions for leave to intervene must be filed under oath or affirmation in accordance with the provisions of Section 2.714 of 10 CFR Part 2 of the Commission's regulations. A petition for leave to intervene must set forth the interest of the petitioner in the proceeding, how that interest may be affected by the results of the proceeding, and the petitioner's contentions with respect to the proposed licensing action. Such petitions must be filed in accordance with the provisions of this FEDERAL REGISTER notice and Section 2.714, and must be filed with the Secretary of the Commission, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Docketing and Service Section, by the above date. A copy of the petition and/or request for a hearing should be sent to the Executive Legal Director, U. S. Nuclear Regulatory Commision, Washington, D. C. 20555, and to Mr. John W. Rowe, Esquire, Isham, Lincoln and Beale, Counselors at Law, One First National Plaza, Chicago, Illinois 60670, the attorney for the licensee.

A petition for leave to intervene must be accompanied by a supporting affidavit which identifies the specific aspect or aspects of the proceeding as to which intervention is desired and specifies with particularity the facts on which the petitioner relies as to both his interest and his contentions with regard to each aspect on which intervention is requested. Petitions stating contentions relating only to matters outside the Commission's jurisdiction will be denied.

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

In the event that a hearing is held and a person is permitted to intervene, he becomes a party to the proceeding and has a right to participate fully in the conduct of the hearing. For example, he may present evidence and examine and cross-examine witnesses.

For further details with respect to these actions, see the Commission's letter to Commonwealth Edison Company dated September 22, 1975, and the attached proposed Technical Specifications and the Safety Evaluation by the Commission's staff dated September 22, 1975, and Commonwealth Edison Company's letter dated October 8, 1975, which are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Moline Public Library, 504 - 17th Street, Moline, Illinois 60625. These license amendments and the Safety Evaluation may be inspected at the above locations and a copy may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Reactor Licensing.

Dated at Bethesda, Maryland, this 3rd day of December, 1975.

FOR THE NUCLEAR REGULATORY COMMISSION

Dennis L. Ziemann

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

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

COMMONWEALTH EDISON COMPANY

DOCKET NOS. 50-254 AND 50-265

QUAD-CITIES NUCLEAR POWER STATION UNITS 1 AND 2

PROPOSED AMENDMENT TO FACILITY OPERATING LICENSES

Amendment No.
License No. DPR-29

Amendment No.
License No. DPR-30

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 Nos. DPR-29 and DPR-30 is hereby amended to read as follows:

   "B. Technical Specifications

   The Technical Specifications contained in Appendices A and B, 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. These license amendments are effective as of the date of their 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 NOS. DPR-29 AND DPR-30

DOCKET NOS. 50-254 AND 50-265

Delete existing pages 71, 72 and 81 of the Technical Specifications and insert the attached revised pages bearing the same numbers. The changed areas on the revised pages are shown by marginal lines.

3.3 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, except as in c. below. 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 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%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 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

3.3 LIMITING CONDITION FOR OPERATION	4.3 SURVEILLANCE REQUIREMENT
b. The control rod directional control valves for inoperable control rods shall be disarmed electrically and the control rods shall be in such positions that Specification 3.3.A.1 is met except as in d. below.	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.
c. Control rod drives which are fully inserted and electrically disarmed shall not be considered inoperable.	
d. Control rods with scram times greater than those permitted by Specification 3.3.C are inoperable, but if they can be moved with control rod drive pressure they need not be disarmed electrically if Specification 3.3.A.1 is met for each position of these rods.	
e. During reactor power operation, the number of inoperable control rods shall not exceed eight.	
3. Rod Position Indication System	3. Rod Position Indication System
a. The position of a control rod shall be determined from the Rod Position Indication System (RPIS).	a. Once per shift during power operation and during control rod withdrawal the control rod display shall be observed for control rod position indication.

reactivity limitation stated in Specification 3.3.A.1. This assures that the core can be shutdown at all times with the remaining control rods assuming the strongest operable control rod does not insert. An allowable pattern for control rods valved out of service, which shall meet the specification, will be available to the operator. The number of rods permitted to be inoperable could be many more than the eight allowed by the specification, particularly late in the operation cycle; however, the occurrence of more than eight could be 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.

3. Rod Position Indication System (RPIS)

Normal control rod position is displayed by two digit indication to the operator from position 00 to 48. Each even number is a latching position, whereas each odd number provides information while the rod is in motion, and input for rod drift annunciation. The LCO provides for the condition where no positive information is displayed for a large portion or all of the rod's travel. In this case the rod is given a full insert signal, individually scrammed and treated as an inoperable rod. Usually only one digit of one or two of a rod's positions is unavailable with a faulty RPIS and the control rod may be located in a known position.

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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 and the design evaluation is given in Section 6.6.3 of the SAR. 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 or 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.