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Docket No. 50-265

Commonwealth Edison Company
 ATTN: Mr. J. S. Abel
 Nuclear Licensing Administrator -
 Boiling Water Reactors
 Post Office Box 767
 Chicago, Illinois 60690

Gentlemen:

The Commission has issued the enclosed Amendment No. 8 to Facility License No. DPR-30 for Unit 2 of the Quad Cities Nuclear Power Station. This amendment includes Change No. 23 to the Technical Specifications and is in response to Commonwealth Edison's request dated December 13, 1974, as supplemented by letter of December 20, 1974.

This amendment incorporates a design feature change that specifies the maximum number of fuel assemblies without reference to the fuel rod array in a fuel assembly and a license change that allows loading but not operation with 8 x 8 reload fuel.

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

Sincerely,

Dennis L. Ziemann
 Dennis L. Ziemann

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

Enclosures:

1. Amendment No. 8
w/Change No. 23
2. Safety Evaluation
3. Federal Register Notice

cc w/enclosures: see next page

Side Drill
Reside to comment 2/7/75
Hold until 2/13
and reply
subject
2/11/75
2/12/75
2/13/75

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| SURNAME ➤ | RReid:aw | RMDiggs | DLZiemann | | KRGoller | AGiambusso |
| DATE ➤ | 1/23/75 | 1/23/75 | 1/23/75 | 2/11/75 | 2/12/75 | 2/13/75 |

No petitions as of 2/11/75 at 9 a.m. - rca

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

Mr. Robert W. Watts, Chairman
Rock Island County Board of
Supervisors
Rock Island County Courthouse
Rock Island, Illinois 61201

cc w/enclosure and cy of CECO filing
dtd. 12/20/74:

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

Mr. Gary Williams
Federal Activities Branch
Environmental Protection Agency
1 N. Wacker Drive, Room 822
Chicago, Illinois 60606

COMMONWEALTH EDISON COMPANY
AND
IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

DOCKET NO. 50-265

QUAD CITIES NUCLEAR POWER STATION UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 8
License No. DPR-30

1. The Nuclear Regulatory Commission (the Commission) has found, with respect to this amendment, that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated December 13, 1974 and supplement dated December 20, 1974, comply 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; and
 - 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.

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2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraphs 3.B and 3.C of Facility License No. DPR-30 are hereby amended and added (respectively) 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. 23.

C. Restrictions

The licensee may load but shall not operate the facility with 8 x 8 reload fuel in the reactor core.

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

FOR THE NUCLEAR REGULATORY COMMISSION

1s/ Roger S. Boyd
A. Giambusso, Director *for*
Division of Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Change No. 23 to the
Technical Specifications

Date of Issuance: *10/15/78*

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ATTACHMENT TO LICENSE AMENDMENT NO. 8

CHANGE NO. 23 TO THE TECHNICAL SPECIFICATIONS

FACILITY OPERATING LICENSE NO. DPR-30

Delete page 219 from the Technical Specifications and insert the attached replacement page. The change on the revised page is shown by a marginal line.

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5.0 DESIGN FEATURES

5.1 Site

The Quad-Cities Nuclear Power Station which consists of a tract of land of approximately 404 acres is located about 3 miles north of Cordova, Illinois, Rock Island County, Illinois. The tract is situated in portions of Section 7, 8, 17 and 18 of Township 20 North, Range 2 East.

5.2 Reactor

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&
23
- A. The core shall consist of not more than 724 fuel assemblies.
 - B. The reactor core shall contain 177 cruciform-shaped control rods. The control material shall be boron carbide powder (B_4C) compacted to approximately 70% of theoretical density.

5.3 Reactor Vessel

The reactor vessel shall be as described in Table 4.1.1 of the SAR. The applicable design codes shall be as described in Table 4.1.1 of the SAR.

5.4 Containment

- A. The principal design parameters and applicable design codes for the primary containment shall be as given in Table 5.2.1 of the SAR.

- B. The secondary containment shall be as described in Section 5.3.2 of the SAR and the applicable codes shall be as described in Section 12.1.1.3 of the SAR.

- C. Penetrations to the primary containment and piping passing through such penetrations shall be designed in accordance with standards set forth in Section 5.2.2 of the SAR.

5.5 Fuel Storage

- A. The new fuel storage facility shall be such that the K_{eff} dry is less than 0.90 and flooded is less than 0.95.
- B. The K_{eff} of the spent fuel storage pool shall be less than or equal to 0.90.

5.6 Seismic Design

The reactor building and all contained engineered safeguards are designed for the maximum credible earthquake ground motion with an acceleration of 24 percent of gravity. Dynamic analysis was used to determine the earthquake acceleration, application to the various elevations in the reactor building.

SAFETY EVALUATION BY THE DIVISION OF REACTOR LICENSING
SUPPORTING AMENDMENT NO. 8 TO FACILITY OPERATING LICENSE NO. DPR-30
(CHANGE NO. 23 TO THE TECHNICAL SPECIFICATIONS)

COMMONWEALTH EDISON COMPANY
AND
IOWA-ILLINOIS GAS AND ELECTRIC COMPANY
QUAD CITIES NUCLEAR POWER STATION UNIT 2

DOCKET NO. 50-265

INTRODUCTION

By letter dated December 13, 1974, and supplement dated December 20, 1974, Commonwealth Edison Company (CE) requested changes to the Technical Specifications appended to Facility Operating License No. DPR-30 for Quad-Cities Unit 2. The proposed changes would permit reloading and operating Quad-Cities Unit 2 with Reload 1 fuel consisting of 8 x 8 fuel assemblies. By a telephone call on January 17, 1975, CE requested permission to load unirradiated Reload 1 fuel assemblies into Quad Cities Unit 2 prior to completion of the Regulatory staff's evaluation of operation with the Reload 1 fuel. A proposed Technical Specification change would establish the maximum number of fuel assemblies (724) as a design feature of the reactor core without reference to the composition of each fuel assembly in regard to the fuel rod array. This evaluation is limited to the considerations involved in loading, but not operating the facility with 8 x 8 fuel assemblies.

EVALUATION

The Regulatory staff has evaluated the December 13, 1974 submittal and supplement and has determined that the nuclear design parameters of the 8 x 8 fuel assemblies are similar to the 7 x 7 fuel assemblies previously loaded in the Quad-Cities Nuclear Power Station Unit 2 and other boiling water reactors. The calculational methods previously used to predict the nuclear characteristics of the 7 x 7 fuel assemblies currently in use have been applied to the 8 x 8 assemblies and are considered adequately conservative to provide assurance that the 8 x 8 fuel can be accurately described as neutronically similar to the 7 x 7 assemblies. Consequently, there are no differences in the safety considerations associated with the loading of 8 x 8 fuel assemblies.

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The maximum allowable linear heat generation rate (LHGR) is established by the most limiting fuel rod in any assembly in the core regardless of its fuel rod array and the maximum average planar LHGR is established by all the rods in any fuel assembly at the most limiting axial location for each fuel rod array. These limiting conditions for operation in conjunction with surveillance requirements assure acceptable fuel performance and not a description of the design features of the reactor core. Therefore, the specification for the fuel rod array in a fuel assembly can be deleted from the design feature description of the reactor core.

Before operation of the facility is authorized with 8 x 8 fuel in the reactor core, the staff will (1) evaluate operation of the reactor with 8 x 8 fuel assemblies; (2) determine that the health and safety of the public will not be endangered by such operation; and (3) issue the required additional Technical Specifications for such operation.

CONCLUSION

Based upon the above considerations, the staff concludes that: (1) because the change 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 provided the Quad Cities 2 reactor is maintained in the shutdown or refuel mode, the change 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 the loading of the Reload 1 fuel in Quad Cities 2, 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: 11/15/75

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UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-265

COMMONWEALTH EDISON COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 8 to Facility Operating License No. DPR-30 issued to Commonwealth Edison Company (acting for itself and on behalf of the Iowa-Illinois Gas and Electric Company) which revised Technical Specifications for operation of the Quad Cities Nuclear Power Station Unit 2 located in Rock Island County, Illinois. The amendment is effective as of its date of issuance.

The amendment incorporates a design feature change by specifying the number of fuel assemblies (724) without reference to the fuel rod array in a fuel assembly, and authorizes loading of 8 x 8 fuel assemblies into the reactor. This amendment is a portion of the proposed amendment noticed in the Federal Register on January 7, 1975 (40 F.R. 1291). No request for a hearing or petition for leave to intervene has been filed in connection with the Notice of Proposed Issuance of Amendment. The remaining changes necessary to complete the proposed amendment to authorize operation of Quad Cities Unit 2 with the 8 x 8 fuel are still under consideration.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. 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.

For further details with respect to this action, see (1) the application for amendment dated December 13, 1974 and supplement thereto dated December 20, 1974, (2) Amendment No. 8 to License No. DPR-30, with Change No. 23, and (3) the Commission's concurrently issued 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 Moline Public Library at 504 - 17th Street, Moline, Illinois 61265. A single copy of items (2) and (3) 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 *13th day of February, 1975.*

FOR THE NUCLEAR REGULATORY COMMISSION

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

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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. 50-265

QUAD CITIES NUCLEAR POWER STATION UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 8
License No. DPR-30

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated December 13, 1974 and supplement dated December 20, 1974, comply 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; and
 - 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.

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This amendmen^s a portion of the proposed amendment
noticed in the Federal Register on ~~October 30, 1974~~ ^{January 7, 1975} (39 ~~F.R.~~ ^{40 F.R.} 38274). No
request for a hearing or petition for leave to intervene has been filed
in connection with the Notice of Proposed Issuance of Amendment. The
remaining changes necessary to complete the proposed amendment to
authorize operation of ^{Quad-Cities} ~~Bresden~~ Unit 2 with the 8 x 8 fuel are still under
consideration.



UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-265

COMMONWEALTH EDISON COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 8 to Facility Operating License No. DPR-30 issued to Commonwealth Edison Company (acting for itself and on behalf of the Iowa-Illinois Gas and Electric Company) which revised Technical Specifications for operation of the Quad Cities Nuclear Power Station Unit 2 located in Rock Island County, Illinois. The amendment is effective as of its date of issuance.

The amendment incorporates a design feature change by specifying the number of fuel assemblies (724) without reference to the fuel rod array in a fuel assembly, and authorizes loading of 8 x 8 fuel assemblies into the reactor.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. 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.