

DEC 05 1974

Docket No. 50-237

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

Gentlemen:

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Docket BScharf (15)
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RVollmer
SVarga
JSaltzman
RMDiggs
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DLZiemann
SKari
WOMiller
Schemel

The Commission has issued the enclosed Amendment No. 5 to Facility License No. DPR-19 for Unit 2 of the Dresden Nuclear Power Station. This amendment includes Change No. 31 to the Technical Specifications and is in response to Commonwealth Edison's request dated August 27, 1974, as supplemented by letter of October 10, 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,

Original signed by
Dennis L. Ziemann

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

Enclosures:

1. Amendment No. 5
w/Change No. 31
2. Safety Evaluation
3. Federal Register Notice

cc w/enclosures:
See attached.

OFFICE >	L:ORB-2 <i>083</i>	L:ORB-2 <i>RS</i>	L:ORB-2 <i>083</i>	OGC <i>12/5/74</i>	L:OR <i>KRG</i>	L:DDRP <i>Conat Hh.</i>
SURNAME >	RMDiggs/tc	RSilver	DLZiemann	<i>12/5/74</i>	KRGoller	AGiambusso
DATE >	11/15/74	11/14/74	11/15/74	11/ 174	12/5/74	12/5/74

Commonwealth Edison Company

- 2 -

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DEC 05 1974

cc w/enclosures:

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

Morris Public Library
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Morris, Illinois 60451

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

Chairman, Board of Supervisors
of Grundy County
Grundy County Courthouse
Morris, Illinois 60450

cc w/enclosures and filing dtd 10/10/74:

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

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-237

DRESDEN NUCLEAR POWER STATION UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 5
License No. DPR-19

1. The Atomic Energy Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated August 27, 1974 and supplement dated October 10, 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.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Facility License No. DPR-19 is hereby amended to read as follows for Paragraph 3.B. and 3.F.

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. 31.

F. 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 ATOMIC ENERGY COMMISSION

Original Signed by

A. Giambusso

A. Giambusso, Deputy Director
for Reactor Projects
Directorate of Licensing

Attachment:
Change No. 31 to the
Technical Specifications

Date of Issuance:

DEC 05 1974

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Delete page 157 from the Technical Specifications and insert the attached replacement page. The change on the revised page is shown by a marginal line.

FACILITY OPERATING LICENSE NO. DPR-19

CHANGE NO. 31 TO THE TECHNICAL SPECIFICATIONS

ATTACHMENT TO LICENSE AMENDMENT NO. 5

5.0 DESIGN FEATURES

5.1 Site

Dresden Unit 2 is located at the Dresden Nuclear Power Station which consists of a tract of land of approximately 953 acres located in the north-east quarter of the Morris 15-minute quadrangle (as designated by the United States Geological Survey), Goose Lake Township, Grundy County, Illinois. The tract is situated in portions of Sections 25, 26, 27, 34, 35 and 36 of Township 34 North, Range 8 East of the Third Principal Meridian.

5.2 Reactor

- 31 |
- 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 5.3.2 of the SAR and the applicable codes shall be as described in Section 12.1.1.3 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 20 per cent of gravity. Dynamic analysis was used to determine the earthquake acceleration, applicable to the various elevations in the reactor building.

SAFETY EVALUATION BY THE DIRECTORATE OF LICENSING

SUPPORTING AMENDMENT NO. 5 TO FACILITY OPERATING LICENSE NO. DPR-19

(CHANGE NO. 31 TO THE TECHNICAL SPECIFICATIONS)

COMMONWEALTH EDISON COMPANY

DRESDEN NUCLEAR POWER STATION UNIT 2

DOCKET NO. 50-237

INTRODUCTION

By letter dated August 27, 1974 and supplement dated October 10, 1974, Commonwealth Edison Company (CE) requested approval to reload and operate with Reload 1 fuel consisting of 8 x 8 and 7 x 7 fuel bundles. By a telephone call on October 31, 1974, CE requested permission to load unirradiated Reload 1 fuel assemblies into Dresden 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.

EVALUATION

The Regulatory staff has evaluated the August 27, 1974 submittal and supplements 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 Dresden 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 neutronicly 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.

The facility will not be permitted to operate with 8 x 8 fuel in the reactor core at this time, therefore, the staff has concluded that no further safety considerations are involved. However, prior to reactor startup, the staff will have: (1) evaluated operation of the reactor with 8 x 8 fuel assemblies; (2) determined that the health and safety of the public will not be endangered by such operation; and (3) issued 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 Dresden 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 Dresden 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.

151

Richard D. Silver
Operating Reactors Branch #2
Directorate of Licensing
Original signed by
Dennis L. Ziemann

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

Date: DEC 05 1974

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UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-237

COMMONWEALTH EDISON COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

Notice is hereby given that the U. S. Atomic Energy Commission (the Commission) has issued Amendment No. 5 to Facility Operating License No. DPR-19 issued to Commonwealth Edison Company which revised Technical Specifications for operation of the Dresden Nuclear Power Station Unit 2 located in Grundy 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 such fuel assemblies into the reactor. This amendment is a portion of the proposed amendment noticed in the Federal Register on October 30, 1974 (39 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 Dresden 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

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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 August 27, 1974 and supplement dated October 10, 1974, (2) Amendment No. 5 to License No. DPR-19, with Change No. 31, 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 Morris Public Library at 604 Liberty Street, Morris, Illinois 60451. A single copy of items (2) and (3) may be obtained upon request addressed to the U. S. Atomic Energy Commission, Washington, D. C. 20545, Attention: Deputy Director for Reactor Projects, Directorate of Licensing - Regulation.

Dated at Bethesda, Maryland, this 5th day of December, 1974.

FOR THE ATOMIC ENERGY COMMISSION

Original signed by
Dennis L. Ziemann

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

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ORB-2 Subject File
KRGoller

Files (Docket No. 50-237)

THRU: D. L. Ziemann, Chief Operating Reactors Branch #2, L

DRESDEN 2 RELOAD REQUEST

By telephone call on October 31, 1974, Jim Abel, Nuclear Licensing Administrator, Boiling Water Reactors, Commonwealth Edison, requested authorization to begin loading 8 x 8 fuel assemblies into the Dresden 2 reactor prior to receiving authorization to operate with 8 x 8 fuel assemblies if it appeared that the request to operate with Reload 1 might not be approved by early December 1974. He also asked if he was required to request this authorization in writing. I informed him that his oral request was sufficient since they had already submitted a request for authorization to operate with 8 x 8 fuel assemblies and we had the information necessary to evaluate the loading of 8 x 8 fuel assemblies.

151

Richard D. Silver
Operating Reactors Branch #2
Directorate of Licensing

cc: J. Abel
Commonwealth Edison

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TJCarter
DLZiemann
RDSilver
RMDiggs
JScinto, OGC

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J. Scinto
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and authorizes proceedings
of each full assembly
into the ~~code~~ ~~code~~
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Amendment
This ~~is~~ is a proposed
portion of the ~~amendment~~ amendment

~~Proposed in~~

Walter F. R.

on October 30, 1974

(39 FR 38274)

No request for hearing
or explanation for leave
to intervene has been
filed in connection
with ~~the~~

The Notice of
Proposed Dismissal
of Amendment.

The necessary changes
necessary to complete
the proposed amendment
and to authorize
the operation with

the 8 x 8 fuel
are still under
consideration

and will be the
subject of subsequent
notice at such

as the Safety Evaluation
~~for operation is complete.~~

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-237

DRESDEN NUCLEAR POWER STATION UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 5
License No. DPR-19

1. The Atomic Energy Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated August 27, 1974 and supplement dated October 10, 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 1;
 - 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;
 - ~~E. Prior public notice of this amendment is not required since the amendment does not involve a significant hazards consideration.~~
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Facility License No. DPR-19 is hereby amended to read as follows for Paragraph 3.B. and 3.F.

*no pr
J. Scott
12/5*

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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. 31.

F. 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 ATOMIC ENERGY COMMISSION

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

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Attachment:
Change No. 31 to the
Technical Specifications

Date of Issuance:

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UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-237

COMMONWEALTH EDISON COMPANY

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OPERATING LICENSE

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The amendment incorporates a design feature change to provide the number of fuel assemblies (724) without reference to the fuel rod array in a fuel assembly. *add by Sects 12/5*

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 August 27, 1974 and supplement dated October 10, 1974, (2) Amendment No. 5 to License No. DPR-19, with Change No. 31, and (3) the Commission's concurrently issued related Safety Evaluation. All of these items are available for public inspection at the

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Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Morris Public Library at 604 Liberty Street, Morris, Illinois 60451. A single copy of items (2) and (3) may be obtained upon request addressed to the U. S. Atomic Energy Commission, Washington, D. C. 20545, Attention: Deputy Director for Reactor Projects, Directorate of Licensing - Regulation.

Dated at Bethesda, Maryland, this

FOR THE ATOMIC ENERGY COMMISSION

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

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