

Docket No. 50-255

TJCanter
PCollins
SVarga
CHebron
RSchemel
ACRS (16)

AUG 9 1974

Consumers Power Company
ATTN: Mr. R. C. Youngdahl
Senior Vice President
212 West Michigan Avenue
Jackson, Michigan 49201

Gentlemen:

The Commission has issued the enclosed Amendment No. 8 to the Provisional Operating License No. DPR-20 for the Palisades Plant. This amendment includes Change No. 12 to the Interim Special Technical Specifications (Amendment 4 to the License) and is in response to your request dated April 18, 1974.

This amendment authorizes the use of a single, fresh fuel assembly in place of one that was damaged during a recent outage.

Copies of the Safety Evaluation and the Federal Register Notice relating to this action are also enclosed.

Sincerely,

Original signed by:
Karl R. Goller

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

Enclosures:

1. Amendment No. 8
2. Safety Evaluation Report
3. Federal Register Notice

bcc: H. J. McAlduff, ORO
J. R. Buchanan, ORNL
T. B. Abernathy, DTIE

cc w/encs:
See attached

| | | | | | | |
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| DATE ▶ | 8/2/74 | 8/ /74 | 8/2/74 | 8/5/74 | 8/7/74 | 8/9/74 |

cc w/encls:

M. I. Miller, Esquire
Isham, Lincoln & Beale
Suite 4200
One First National Plaza
Chicago, Illinois 60670

J. L. Bacon, Esquire
Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

Paul A. Perry, Sec.
Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

Mr. Ronald C. Callen
Michigan Public Service Commission
Law Building
Lansing, Michigan 48913

Kalamazoo Public Library
315 South Rose Street
Kalamazoo, Michigan 49006

Mr. Jerry Sarno
Township Supervisor
Covert Township, Rt. 1, Box 10
Van Buren County, Michigan 49043

Mr. D. John Beck
Division of Intergovernmental
Relations
Executive Office of the Governor
Lewis Cass Building, 2nd Floor
Lansing, Michigan 48913
(w/copy of incoming dtd. 4/18/74)

Mr. Gary Williams
Federal Activities Branch
Environmental Protection Agency
1 N. Wacker Drive, Room 822
Chicago, Illinois 60606
(w/copy of incoming dtd. 4/18/74)

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CONSUMERS POWER COMPANY

DOCKET NO. 50-255

PALISADES PLANT

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 8
License No. DPR-20

1. The Atomic Energy Commission (the Commission) has found that:
 - A. The application for amendment by Consumers Power Company (the licensee) dated April 18, 1974, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended, 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;
 - 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; and
 - 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 Paragraph 3.B of Facility License No. DPR-20 is hereby amended to read as follows:

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"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. 12".

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

FOR THE ATOMIC ENERGY COMMISSION

Original signed by:
Karl R. Goller

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

**Attachment:
Change No. 12 to
Technical Specifications**

Date of Issuance: AUG 9 1974

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ATTACHMENT TO LICENSE AMENDMENT NO. 8

CHANGE NO. 12 TO THE INTERIM SPECIAL TECHNICAL SPECIFICATIONS

PROVISIONAL OPERATING LICENSE NO. DPR-20

CONSUMERS POWER COMPANY

PALISADES PLANT

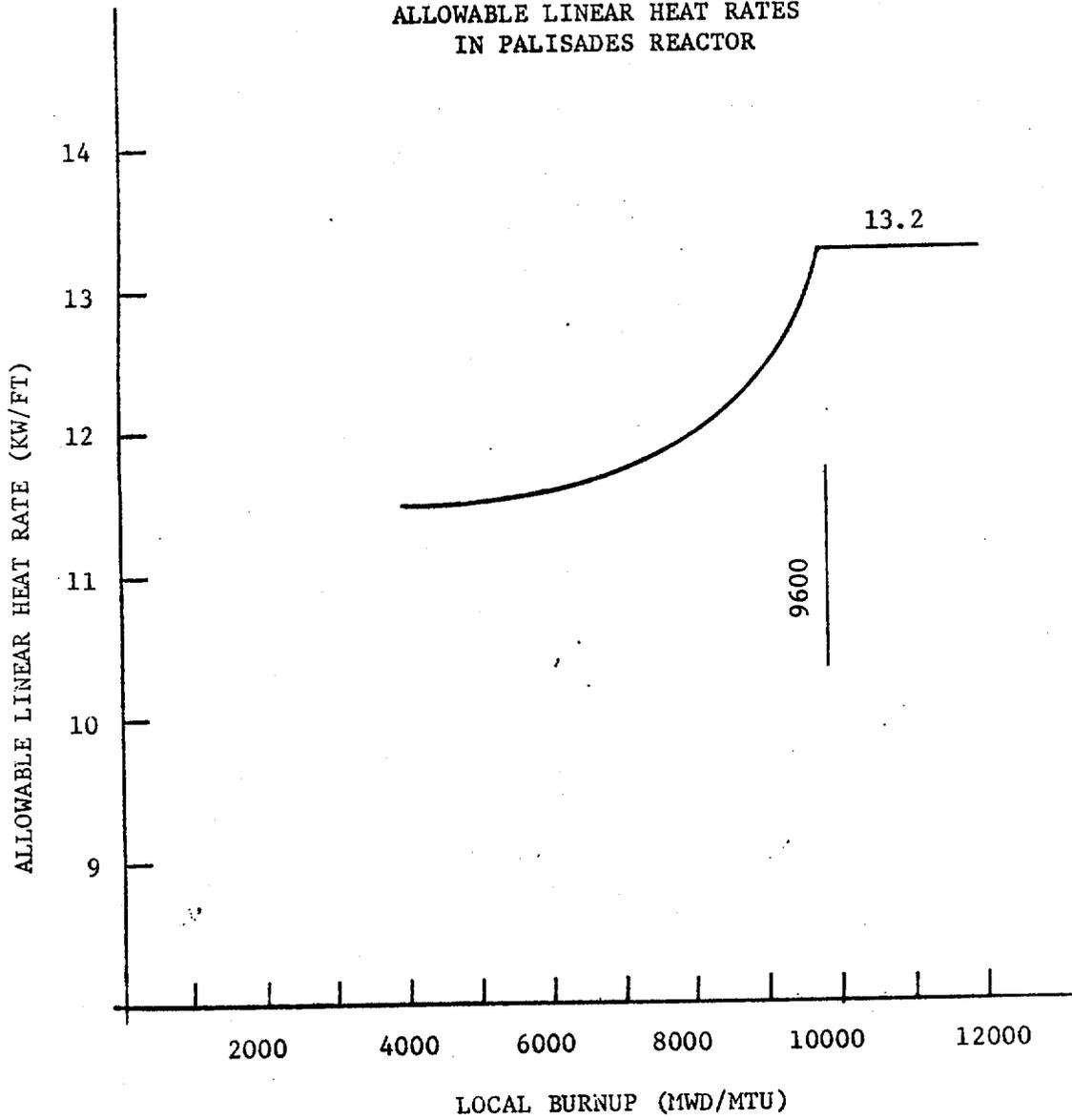
DOCKET NO. 50-255

Change Appendix B - Interim Tech Specs as follows:

- A. Change "10,300 Mwd/MTU" in Items 3 and 5 to "10,265 Mwd/MTU."
- B. Change Item 3.a to read as follows:
- "a. The peak linear power with appropriate consideration of normal flux peaking, flux peaking augmentation factors, measurement-calculational uncertainty (10%), engineering factor (3%), increase in linear heat rate due to axial fuel densification (1.75%) and power measurement uncertainty (2%), shall not exceed the kW/ft limit shown in Figure B-2 for unpressurized fuel and 11.5 kW/ft for prepressurized fuel (Bundle B-69)."
- C. Change Item 3.c to read as follows:
- "c. For power operation above a power level of 85% of the level permitted by 3.a, in-core detector alarms generated by the data logger shall be set, based on the latest power distribution obtained, such that the peak linear power including appropriate consideration of flux peaking augmentation factors does not exceed the limits specified in 3.a. If four or more coincident alarms are received, the validity of the alarms shall be immediately determined and, if valid, power shall be immediately decreased below alarm set point and a power distribution map obtained. If a power distribution is not obtained within 24 hours of the alarm condition, power shall be reduced to 85% of the value defined in 3.a."
- D. Add Sheet containing Figure B-2 titled "Allowable Linear Heat Rates in Palisades Reactor".

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FIGURE B-2
ALLOWABLE LINEAR HEAT RATES
IN PALISADES REACTOR



Change No. 6
April 6, 1973

SAFETY EVALUATION BY THE DIRECTORATE OF LICENSING
SUPPORTING AMENDMENT NO. 8 TO LICENSE NO. DPR-20
(CHANGE NO. 12 TO INTERIM SPECIAL TECHNICAL SPECIFICATIONS)

CONSUMERS POWER COMPANY

PALISADES PLANT

DOCKET NO. 50-255

Introduction

By a letter dated April 18, 1974, Consumers Power Company submitted an application for a change to the Special Interim Technical Specifications, Appendix B to License No. DPR-20 to allow operation with one unirradiated fuel assembly in the core. The proposed change includes restrictions on the operation of the reactor to account for the effects of fuel densification.

Evaluation

Fuel assembly No. C-14 was damaged during reloading of the core after the completion of the inspection of the core internals during the shutdown starting in August 1973. Consumers Power Company has proposed replacing the damaged element with one of three spare fuel assemblies that were manufactured along with the other assemblies of the present fuel loading. The selection was based on matching as closely as possible the physics and thermal hydraulic properties of the damaged assembly so the effect on operating considerations would be minimized. Even so, the assembly selected is somewhat more reactive than the damaged assembly. However, by moving several fuel assemblies in the quadrant containing the fresh assembly, asymmetries in the power distribution have been minimized. Calculations show that there is an insignificant change in the radial peaking factor as a result of this change. The replacement assembly, B-69, is essentially identical to the "B" batch as described in the FSAR and previous submittals on fuel densification with the exception that it is pressurized with helium to a pressure greater than 200 psig. The pressurization was performed to enhance the assembly's resistance to clad collapse and to improve gap conductivity over unpressurized fuel. During the pressurization work, it was necessary to add two extra

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spacer guides and to remove a pellet from six of the fuel rods. The flow characteristics of the assembly with the additional spacer grids were analyzed by Consumers Power Company and found to be acceptable in terms of DNBR and compatibility with the remainder of the core. Removal of the six pellets results in no significant change to either the nuclear or thermal hydraulic characteristics of the fuel assembly.

The major impact of the change is on the operational limits on linear heat generation rate (LHGR) that must be applied to the new fuel to ensure that the Interim Acceptance Criteria are not exceeded in the event of a LOCA. Except for the fact that the replacement fuel is pressurized, (which improves its performance) the effects of densification are the same for both the fresh and original fuel. Thus, Consumers Power Company has used the burnup dependent LHGR limits applicable to the original fuel to establish the limit for the fresh assembly. This limit, 11.5 kw/ft, is the minimum of the burnup dependent limit allowed for the original fuel and represents a conservative estimate of the limit for the fresh assembly.

The LHGR at Palisades has been and will continue to be monitored using the fixed incore detector system. In this mode of operation, detector output is periodically converted into a power distribution using the INCA code. Margins to LHGR limits are evaluated and alarms are set to annunciate if the LHGR exceeds the appropriate limit. Since INCA assumes a symmetrical power distribution exists in generating the power map, Combustion Engineering (CE) has modified the procedures for interpreting the output of the code to accommodate the minor power asymmetries that will exist due to the presence of the fresh assembly.

Changes in the Interim Special Technical Specifications have been proposed to accommodate the use of the fresh assembly. The LHGR limits have been changed to reflect a limit for the single pressurized assembly of 11.5 kw/ft; the limits for other assemblies in the core will remain unchanged. In addition, the core average burnup that defines the point in time of postulated clad collapse has been reduced from 10,300 to 10,265 MWD/MTU to account for the insertion of the fresh assembly. The staff finds both of these changes conservative and acceptable.

Conclusion

We have concluded, based on the reasons discussed above, that the authorization of this change does not involve a significant hazards consideration. We also conclude that there is reasonable assurance

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(1) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (11) that 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.

Original signed by:
Robert A. Purple

for

Dunlap Scott
Operating Reactors Branch #1
Directorate of Licensing

Original signed by:
Robert A. Purple

Robert A. Purple, Chief
Operating Reactors Branch #1
Directorate of Licensing

Date: AUG 9 1974

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UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-255

CONSUMERS POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO PROVISIONAL OPERATING LICENSE

Notice is hereby given that the U. S. Atomic Energy Commission (the Commission) has issued Amendment No. 8 to Facility Operating License No. DPR-20 issued to Consumers Power Company which revised Technical Specifications for operation of the Palisades Plant, located in Covert Township, Van Buren County, Michigan. The amendment is effective as of its date of issuance.

The amendment permits a change in the Interim Special Technical Specifications to authorize the use of a single, fresh fuel assembly in place of one that was damaged during a recent outage.

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 April 18, 1974, (2) Amendment No. 8 to License No. DPR-20, with any attachments, and (3) the Commission's

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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 Kalamazoo Public Library, 315 South Rose Street, Kalamazoo, Michigan 49006.

A 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 day of AUG 9 1974

FOR THE ATOMIC ENERGY COMMISSION

Original signed by:
Robert A. Purple

**Robert A. Purple, Chief
Operating Reactors Branch #1
Directorate of Licensing**

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PRELIMINARY DETERMINATION - NOTICING OF PROPOSED LICENSE AMENDMENT

Licensee: Consumers Power Company

Facility: Palisades

Docket No: 50-255

Request for: Change to Tech Specs to account for reconfiguration of the core because of the replacement of a damaged fuel element with a new one.

Request Date: April 18, 1974

- Recommended action: () Pre-notice
 (x) Post-notice
 () Determination delayed pending completion of Safety Evaluation

Basis for Recommendation: This action is similar in principle to a core reloading in which no fuel assemblies significantly different from those used and analyzed for a previous core are involved, no changes are made to the bases for the Tech Specs, and the analytical methods used to demonstrate conformance with the bases are unchanged (ref. RPOP 601, Rev 2)

| | Concurrences | | | | Approval |
|---------|--------------|----------|----------|----------|----------|
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| SURNAME | ABurger:dc | RAPurple | KRGoller | R Kinsey | |
| DATE | 7/11/74 | 7/11/74 | 7/11/74 | | 8/7 |