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Docket No. 50-255

Mr. David Bixel
 Nuclear Licensing Administrator
 Consumers Power Company
 212 West Michigan Avenue
 Jackson, Michigan 49201

OCT 30 1979

Dear Mr. Bixel:

The Commission has issued the enclosed Amendment No. 54 to Provisional Operating License No. DPR-20 for the Palisades Plant. This amendment consists of changes to the Technical Specifications in response to your request dated June 7, 1979.

This amendment changes the Technical Specifications to provide for an improved physics testing program and to delete portions of the Technical Specifications which are no longer applicable.

Copies of our Safety Evaluation and the Notice of Issuance also are enclosed.

Sincerely,

Original signed by
Dennis L. Ziemann

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

Enclosures:

- Amendment No. 54 to License No. DPR-20
- Safety Evaluation
- Notice

cc w/enclosures:
See next page

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OFFICE	DOR:ORB #2	DOR:ORB #2	OELD	DOR:ORB #2	DOR:AD/SEP
SURNAME	HSmith:ah	RDSilver		DLZiemann	RHVolmer
DATE	10/22/79	10/23/79	10/ /79	10/28/79	10/30/79



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

October 30, 1979

Docket No. 50-255

Mr. David Bixel
Nuclear Licensing Administrator
Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

Dear Mr. Bixel:

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This amendment changes the Technical Specifications to provide for an improved physics testing program and to delete portions of the Technical Specifications which are no longer applicable.

Copies of our Safety Evaluation and the Notice of Issuance also are enclosed.

Sincerely,

A handwritten signature in cursive script that reads "Dennis L. Ziemann".

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

Enclosures:

1. Amendment No. 54 to License No. DPR-20
2. Safety Evaluation
3. Notice

cc w/enclosures:
See next page

October 30, 1979

cc w/enclosures:

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Lansing, Michigan 48913

Director, Technical Assessment
Division
Office of Radiation Programs
(AW-459)
U. S. Environmental Protection
Agency
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*w/cy of CPC filing dtd, 6/7/79

U. S. Environmental Protection
Agency
Federal Activities Branch
Region V Office
ATTN: EIS COORDINATOR
230 South Dearborn Street
Chicago, Illinois 60604

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Atomic Safety and Licensing Board
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

CONSUMERS POWER COMPANY

DOCKET NO. 50-255

PALISADES PLANT

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 54
License No. DPR-20

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Consumers Power Company (the licensee) dated June 7, 1979, complies 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;
 - 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. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

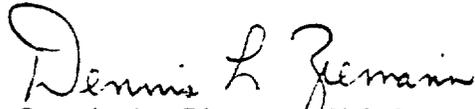
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 3.B of Provisional Operating License No. DPR-20 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 54, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION



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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 30, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 54

PROVISIONAL OPERATING LICENSE NO. DPR-20

DOCKET NO. 50-255

Revise Appendix A Technical Specifications by removing the following pages and by inserting the enclosed pages. The revised pages contain the captioned amendment number and marginal lines indicating the area of change.

PAGES

1-2

3-40a

3-61

6-26

1.1 REACTOR OPERATING CONDITIONS (Contd)

Low Power Physics Testing

Testing performed under approved written procedures to determine control rod worths and other core nuclear properties. Reactor power during these tests shall not exceed 2% of rated power, not including decay heat and primary system temperature and pressure shall be in the range of 260°F to 538°F and 415 psia to 2150 psia, respectively. Certain deviations from normal operating practice which are necessary to enable performing some of these tests are permitted in accordance with the specific provisions therefore in these Technical Specifications.

Shutdown Boron Concentrations

Boron concentration sufficient to provide $k_{eff} \leq 0.98$ with all control rods in the core and the highest worth control rod fully withdrawn.

Refueling Boron Concentration

Boron concentration of coolant at least 1720 ppm (corresponding to a shutdown margin of at least 5% $\Delta\rho$ with all control rods withdrawn).

Quadrant Power Tilt

The difference between nuclear power in any core quadrant and the average in all quadrants.

Assembly Radial Peaking Factor - F_R^A

The assembly radial peaking factor is the maximum ratio of individual fuel assembly power to core average assembly power integrated over the total core height, including tilt.

Total Radial Peaking Factor - F_R^T

The total radial peaking factor is the maximum product of the ratio of individual assembly power to core average assembly power times the local peaking factor for that assembly integrated over the total core height, including tilt. Local peaking factor is defined as the maximum ratio of the power in an individual fuel rod to assembly average rod power.

1.2 PROTECTIVE SYSTEMS

Instrument Channels

One of four independent measurement channels, complete with the sensors, sensor power supply units, amplifiers and bistable modules provided for each safety parameter.

Reactor Trip

The de-energizing of the control rod drive mechanism (CRDM) magnetic clutch holding coils which releases the control rods and allows them to drop into the core.

3.6.4

DELETED

3-40a

Amendment No. 17, 54

3.10 CONTROL ROD AND POWER DISTRIBUTION LIMITS (Contd)

3.10.6 Shutdown Rod Limits

- a. All shutdown rods shall be withdrawn before any regulating rods are withdrawn.
- b. The shutdown rods shall not be withdrawn until normal water level is established in the pressurizer.
- c. The shutdown rods shall not be inserted below their exercise limit until all regulating rods are inserted.

3.10.7 Low Power Physics Testing

Sections 3.10.1.a, 3.10.1.b, 3.10.2.b, 3.10.3.f, 3.10.4.b, 3.10.5 and 3.10.6 may be deviated from during low power physics testing and CRDM exercises if necessary to perform a test, but only for the time necessary to perform the test.

3.10.8 Center Control Rod Misalignment

The requirements of Specifications 3.10.4.a, 3.10.4.c, 3.10.5 and S-5.1 may be suspended during the performance of physics tests to determine the isothermal temperature coefficient and power coefficient provided that only the center control rod is misaligned and the limits of Specification 3.10.3 are maintained.

Basis

Sufficient control rods shall be withdrawn at all times to assure that the reactivity decrease from a reactor trip provides adequate shutdown margin. The available worth of withdrawn rods must include the reactivity defect of power and the failure of the withdrawn rod of highest worth to insert. The requirement for a shutdown margin of 2.0% in reactivity with 4-pump operation, and of 3.75% in reactivity with less than 4-pump operation, is consistent with the assumptions used in the analysis of accident conditions (including steam line break) as reported in KN-NF-77-18 and additional analysis.⁽⁵⁾ The change in insertion limit with reactor power shown on Figure 3-6 insures that the shutdown margin requirement for 4-pump operation is met at all power levels.

The 2.5-second drop time specified for the control rods is the drop time used in the transient analysis.⁽⁵⁾

The maximum individual rod worth of inserted control rods and associated peaking factors have been used to demonstrate reactor safety for the unlikely event of a rod ejection accident as described in Reference 5. The maximum worth of an inserted control rod will not exceed the values of the specification for the regulating group insertion limits of Figure 3-6.

The limitation on linear heat generation rate ensures that in the event of a LOCA, the Nuclear Regulatory Commission criteria set forth in 10 CFR 50.45(b) will be met.⁽⁶⁾ In addition, the limitation on linear heat rate ensures that the minimum DNBR will be maintained above 1.30 during anticipated transients, and that fuel damage (if any) during Condition IV events such as Locked

6.9.3.3 Special Reports

- a. Special reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable referenced specification:

<u>Area</u>	<u>Specification Reference</u>	
Prestressing, Anchorage, Liner and Penetration Tests	4.5.4 4.5.5	90 Days After Completion of the Test*
Primary System Surveillance Evaluation and Review	4.3	Five Years

*A test is considered to be complete after all associated mechanical, chemical, etc., tests have been completed.

- b. Bimonthly status reports on the program to improve the reliability of the paths to prevent post-LOCA boron precipitation shall be submitted to the Division of Operating Reactors until completed.
- c. Deleted.

6.10 RECORD RETENTION

(Records not previously required to be retained shall be retained as required below commencing with the effective date of Technical Specification Change No. 20. A system for efficient record retrieval shall be in effect not later than June 1976.)

- 6.10.1 The following records shall be retained for at least five years:
- a. Records and logs of facility operation covering time interval at each power level.
 - b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.
 - c. Reportable occurrences.
 - d. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 54 TO PROVISIONAL OPERATING LICENSE NO. DPR-20

CONSUMERS POWER COMPANY

PALISADES PLANT

DOCKET NO. 50-255

1.0 INTRODUCTION

By application dated June 7, 1979, Consumers Power Company (the licensee) requested an amendment to the Technical Specifications appended to License No. DPR-20 for the Palisades Plant. The amendment would provide for an improved physics testing program and delete portions of the Technical Specifications which are no longer applicable.

2.0 EVALUATION

The licensee's proposal to change the reactor power limit during low power physics tests from "10⁻²%" to "2%" of rated power is to allow low power physics testing at flux levels high enough to minimize the influence of gamma background noise on the measurements. The tests would be performed in the optimum range between the background level and the region of sensible heat, but no greater than 2% thermal power. The value of 2% is the upper bound for the Hot Standby condition, so the mode of operation during the tests would not change. The Combustion Engineering (CE) Technical Specifications allow 5% power for these tests. We, therefore, find the proposed change acceptable.

The licensee has also requested the addition of a new Section 3.10.8, "Center Control Rod Misalignment." This addition would allow the use of only one control rod rather than the entire group during the performance of temperature and power coefficient tests. In these tests, reactivity is inferred from the amount of control rod motion and, since the worth of a single control rod is about one quarter of that of a regulating group, the rod will travel four times as far. The measurement uncertainty in control rod positions over

small distances, which is a major source of uncertainty in these tests, will therefore be significantly reduced. Utilization of the center rod minimizes the impact on core power distribution and results in no azimuthal tilts. Margin to thermal limits will be maintained throughout the tests. A similar provision currently exists in the CE Standard Technical Specifications, and we, therefore, find the proposed change acceptable.

Deletion of Specification 3.6.4 would eliminate a specification that was authorized on a one time only basis for preparation of the December 1975 outage. Section 6.9.3.3.c was approved to require a report on the results of the fuel surveillance program prior to the use of Cycle 2 fuel for Cycle 3. This report was submitted on March 14, 1978. The upcoming reload is for Cycle 4. Based on the above, we find the two (2) proposed deletions acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not involve a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the amendment 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, the amendment 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 operation in the proposed manner, 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: October 30, 1979

UNITED STATES NUCLEAR REGULATORY COMMISSION
DOCKET NO. 50-255
CONSUMERS POWER COMPANY
NOTICE OF ISSUANCE OF AMENDMENT TO PROVISIONAL
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 54 to Provisional Operating License No. DPR-20, issued to Consumers Power Company (the licensee), which revised the Technical Specifications for operation of the Palisades Plant (the facility) located in Covert Township, Van Buren County, Michigan. The amendment is effective as of its date of issuance.

The amendment changes the Technical Specifications to provide for an improved physics testing program and to delete portions of the Technical Specifications which are no longer applicable.

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. Prior public notice of this action was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

- 2 -

For further details with respect to this action, see (1) the application for amendment dated June 7, 1979, (2) Amendment No. 54 to License No. DPR-20, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection as 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 requested addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 30th day of October, 1979.

FOR THE NUCLEAR REGULATORY COMMISSION



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

Hazel

Final

William O. Miller, Chief
License Fee Management Branch, ADM

Date: 7/20/79

Amended Form Date: 10/30/79

FACILITY AMENDMENT CLASSIFICATION - DOCKET NO(S). 50-255-

Licensee: Consumers Power Co.

Plant Name and Unit(s): Palisades plant

License No(s): DPR-20

Mail Control No: 79---172

Request Dated: 6/7/79

Fee Remitted: Yes No

Assigned TAC No: ~~11837~~ 11844

Licensee's Fee Classification: Class I , II , III , IV , V , VI

Subject: Physics ^{None} Testing

Amendment No. 54 Date of Issuance 10/30/79

- 1. This request has been reviewed by DOR/DPM in accordance with Section 170.22 of Part 170 and is properly categorized.
- 2. This request is incorrectly classified and should be properly categorized as Class _____. Justification for classification or reclassification: _____
- 3. Additional information is required to properly categorize the request: _____
- 4. This request is a Class _____ type of action and is exempt from fees because it:
 - (a) _____ was filed by a nonprofit educational institution,
 - (b) _____ was filed by a Government agency and is not for a power reactor,
 - (c) _____ is for a Class _____ (can only be a I, II, or III) amendment which results from a written Commission request dated _____ for the application and the amendment is to simplify or clarify license or technical specifications, has only minor safety significance, and is being issued for the convenience of the Commission, or
 - (d) _____ other (state reason therefor): _____

HS 7/13
RS
R Silver

988
Richard O. Silver for D.L.Z.
-Division of Operating Reactors/Project Management

- THE INITIAL FEE DETERMINATION HAS BEEN REASSESSED AND IS HEREBY AFFIRMED
- The above request has been reviewed and is exempt from fees.