

October 20, 1987

Docket No. 50-255

Mr. Kenneth W. Berry
Director, Nuclear Licensing
Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Dear Mr. Berry:

SUBJECT: AMENDMENT NO. 107 CHANGE TO PROVISIONAL OPERATING LICENSE
NO. DPR 20, PIPING SNUBBERS (TAC NO. 65533)

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The Commission has issued the enclosed Amendment No. 107 to Provisional Operating License No. DPR-20 for the Palisades Plant. This amendment consists of changes to the Technical Specifications in response to your application dated May 28, 1987.

This amendment removes the Tables of specific piping snubbers from the Technical Specifications in accordance with the guidance in NRC Generic Letter 84-13, deletes the numerical value of the acceptance criterion for drag force for mechanical snubbers, and clarifies the functional testing requirements for snubbers of rated capacity greater than 50,000 pounds. Your staff agreed to a rewording of Specification 3.20.1 to make it consistent with the Standard Technical Specifications forwarded to you as an enclosure to Generic Letter 84-13.

A copy of our related Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

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Thomas V. Wambach, Project Manager
Project Directorate III-1
Division of Reactor Projects - III, IV, V
& Special Projects

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Enclosures:

1. Amendment No. 107 to License No. DPR-20
2. Safety Evaluation

cc w/enclosures:
See next page

PD31 DRSP
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OGC
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10/16/87
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

CONSUMERS POWER COMPANY

PALISADES PLANT

DOCKET NO. 50-255

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 107
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 May 28, 1987, 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.

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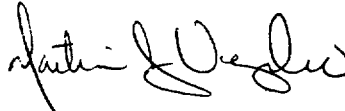
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 3.B. of Provisional Operating License No. DPR-20 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 107, 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



Martin J. Virgilio, Director
Project Directorate III-1
Division of Reactor Projects - III, IV, V
& Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 20, 1987

ATTACHMENT TO LICENSE AMENDMENT NO. 107

PROVISIONAL OPERATING LICENSE NO. DPR-20

DOCKET NO. 50-255

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

REMOVE

3-88
3-89
3-90
3-91
4-71
4-72
4-73
4-74
-

INSERT

3-88
-
-
-
4-71
4-72
4-73
4-74
4-74a

3.20 Shock Suppressors (Snubbers)

Applicability

Applies to the operating status of the safety-related piping shock suppressors (snubbers). The only snubbers excluded from this requirement are those installed on nonsafety-related systems and then only if their failure or failure of the system on which they are installed would have no adverse effect on any safety-related system.

Objective

To minimize the possibility of unrestrained pipe motion as might occur during an earthquake or severe transient.

Specifications

3.20.1 When systems associated with snubbers in Specification 3.20 are required to be operable, the snubbers in those systems shall be operable except as noted below:

- a. With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.16.1.c. on the supported component or declare the system inoperable.

Bases

Snubbers are required to be operable to ensure that the structural integrity of the reactor coolant system and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads.

4.16 Inservice Inspection Program for Shock Suppressors (Snubbers)

Applicability

Applies to periodic surveillance of safety-related snubbers as described per Specification 3.20.

Specifications

4.16.1 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program.

a. Visual Inspection

Visual inspection shall be performed in accordance with the following schedule:

<u>No. Inoperable Snubbers per Inspection Period</u>	<u>Subsequent Visual Inspection Period</u> ^{1,2}
0	18 months ± 25%
1	12 months ± 25%
2	6 months ± 25%
3,4	124 days ± 25%
5,6,7	62 days ± 25%
8 or more	31 days ± 25%

The snubbers may be categorized into two groups: Those accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule.

b. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visible indications of damage or impaired OPERABILITY and (2) attachments to the foundation or supporting structure are secure. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, providing that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible; and (2) the affected snubber is functionally tested in the as-found condition and determined OPERABLE per Specifications 4.16.1.d or 4.16.1.e, as applicable. All snubbers connected to an inoperable common hydraulic fluid reservoir shall be counted as inoperable snubbers.

¹The inspection interval shall not be lengthened more than one step at a time.

²The provisions of Specification 4.0.2 are not applicable.

4.16.1 Specifications (continued)

c. Functional Tests

At least once per 18 months during shutdown, a representative sample (10% of the total safety-related snubbers in use at the plant) shall be functionally tested either in place or in a bench test. The test shall verify the snubber has freedom of movement and is not frozen up. For each snubber which did not meet the functional test acceptance criteria of Specification 4.16.1.d or 4.16.1.e,³ an additional 10% of the total shall be functionally tested.

The representative sample selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers. Snubbers identified as especially difficult to remove or in high radiation zones during shutdown shall also be included in the representative sample.⁴

In addition to the regular sample, snubbers which failed the previous functional test shall be retested during the next test period. If a spare snubber has been installed in place of a failed snubber, then both the failed snubber (if it is repaired and installed in another position) and the spare snubber shall be retested. Test results of these snubbers may not be included for the resampling.

If any snubber selected for functional testing either fails to lockup or fails to move, i.e., frozen in place, the cause will be evaluated and, if caused by manufacturer or design deficiency, all snubbers of the same design subject to the same defect shall be functionally tested. This testing requirement shall be independent of the requirements stated above for snubbers not meeting the functional test acceptance criteria.

Snubbers of rated capacity greater than 50,000 pounds will be functionally tested in lots comprising 25% of their total during each refueling outage. In the event of one snubber failure out of the four tested, no additional snubbers will be tested provided the problem is non-generic. For each additional snubber failure, however, two additional snubbers will be tested until no further snubber failures are identified or all snubbers have been tested. Generic failures will be handled as the specific circumstances require.

³ Snubbers of rated capacity greater than 50,000 pounds are not to be included when defining the total number of safety-related snubbers in use at the plant.

⁴ Permanent or other exemptions from functional testing for individual snubbers may be granted by the Commission only if a justifiable basis for exemption is presented and/or snubber life destructive testing was performed to qualify snubber operability for all design conditions at either the completion of their fabrication or at a subsequent date.

4.16.1 Specifications (continued)

For the snubber(s) found inoperable, an engineering evaluation shall be performed on the components which are suppressed by the snubber(s). The purpose of this engineering evaluation shall be to determine if the components suppressed by the snubber(s) were adversely affected by the inoperability of the snubber(s) in order to ensure that the suppressed component remains capable of meeting the designed service.

d. Hydraulic Snubbers Functional Test Acceptance Criteria

The hydraulic snubber functional test shall verify that:

1. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.
2. Snubber bleed, or release rate, where required, is within the specified range in compression or tension. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

e. Mechanical Snubbers Functional Test Acceptance Criteria

The mechanical snubber functional test shall verify that:

1. The force that initiates free movement of the snubber rod in either tension or compression is less than the specified maximum drag force (break away friction).
2. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.
3. Snubber release rate, where required, is within the specified range in compression or tension. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

i. Snubber Service Life Monitoring

A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained as required by Specification 6.10.2.1.

Concurrent with the first inservice visual inspection and at least once per 18 months thereafter, the installation and maintenance records for each safety related snubber in use in the plant shall be reviewed to verify that the indicated service life

4.16.1 f. (Continued)

has not been exceeded or will not be exceeded prior to the next scheduled **service** life review. If the indicated service life will be exceeded prior to the next scheduled snubber service life review, the snubber service life shall be reevaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This re-evaluation, replacement or reconditioning shall be indicated in the records.

4.16 Bases

The visual inspection frequency is based upon maintaining a constant level of snubber protection to systems. Therefore, the required inspection interval varies inversely with the observed snubber failures and is determined by the number of inoperable snubbers found during an inspection. Inspections performed before that interval has elapsed may be used as a new reference point to determine the next inspection. However, the results of such early inspections, performed before the original required time interval has elapsed (nominal time less 25%) may not be used to lengthen the required inspection interval. Any inspection whose results require a shorter inspection interval will override the previous schedule.

When the cause of the rejection of a snubber is clearly established and remedied for the snubber and for any other snubbers that may be generically susceptible, and verified by inservice functional testing, that snubber may be exempted from being counted as inoperable. Generically susceptible snubbers are those which are of a specific make or model and have the same design features directly related to rejection of the snubber by visual inspection, or are similarly located or exposed to the same environmental conditions such as temperature, radiation and vibration.

When a snubber is found inoperable, an engineering evaluation is performed, in addition to the determination of the snubber mode of failure, in order to determine if any safety-related component or system has been adversely affected by the inoperability of the snubber. The engineering evaluation shall determine whether or not the snubber mode of failure has imparted a significant effect or degradation on the supported component or system.

To provide assurance of snubber functional reliability, a representative sample of the installed snubbers, excluding snubbers of rated capacity greater than 50,000 pounds, will be functionally tested at 18 month intervals. A representative sample of snubbers of rated capacity greater than 50,000 pounds will be functionally tested each refueling outage.

4.16 Bases (continued)

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs.

The service life of a snubber is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubber, seal replaced, spring replaced, in high radiation area, in high-temperature area, etc. . .). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life. The requirements for the maintenance of records and the snubber service life review are not intended to affect plant operation.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 107 TO PROVISIONAL OPERATING LICENSE NO. DPR-20

CONSUMERS POWER COMPANY

PALISADES PLANT

DOCKET NO. 50-255

INTRODUCTION

By application dated May 28, 1987, Consumers Power Company (the licensee) requested a change to the Technical Specifications to delete Tables 3.20.1 and 3.20.2 that listed the safety-related hydraulic and mechanical snubbers installed at Palisades. This request is consistent with the NRC guidance issued in Generic Letter 84-13 dated May 3, 1984. In addition, the application requested transferring the numerical values of the acceptance criteria for drag force for the mechanical snubbers out of the Technical Specifications and into the maintenance procedure for performing the test. Finally, functional testing requirements for snubbers of rated capacity greater than 50,000 pounds was proposed to be added to the Technical Specifications.

EVALUATION

The operability requirement for hydraulic and mechanical snubbers is not being changed by removing the listing of the specific snubbers in the Technical Specifications. With this listing in the Technical Specifications, a license amendment was required any time plant modifications resulted in the addition or deletion of a snubber. Specification 3.20 will continue to require the snubbers to be operable. Although the licensee proposed to include the lists of snubbers in Engineering Manual (EM) 09-07, this document is not described in the Final Safety Analysis Report (FSAR) and, therefore would not fall within the scope of 10 CFR 50.59. The licensee has agreed that the identification of the applicable snubbers be added to the Updated FSAR. Whenever a plant modification is made that would involve the addition or deletion of snubbers, the licensee must perform an evaluation to determine that the design requirements of the appropriate codes and standards identified in the FSAR are being met. This evaluation will continue to be performed for such modifications. In addition, with the snubbers now described in the FSAR, 10 CFR 50.59 would require the licensee's evaluation to determine that an unreviewed safety question, as defined therein, was not involved in the modification, or obtain NRC approval. This maintains an acceptable control over the identification of the snubbers to which Specification 3.20 applies.

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The transferring of the numerical values of the acceptance criteria for drag force for the mechanical snubbers from the Technical Specifications to the maintenance procedure is also acceptable. The criteria are specified by the snubber manufacturer and may vary. If snubbers are replaced with those of a different manufacturer, the changing of the number will no longer require a license amendment; however control is maintained by means of the maintenance procedure revision process.

Finally, the functional testing requirements for snubbers of rated capacity greater than 50,000 pounds exceed the requirements of the ASME Code and of the Standard Technical Specifications and are acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and a change in a surveillance requirement. We have determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: October 20, 1987

Principal Contributors: T. V. Wambach