

September 17, 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: PALISADES PLANT - EXEMPTION TO 10 CFR PART 50, APPENDIX J  
(TAC NO. 62841)

By letter dated August 22, 1986, you requested exemption from the requirements of Section III.A.6.(b) of Appendix J to 10 CFR Part 50. We have completed our review of your request and have granted it in part, per your agreement. Whereas you requested that the schedule revert to that required by Section III.D of Appendix J, we are granting exemption from the 18-month restriction and the requirement for two consecutive successful tests prior to returning to the schedule of III.D.

The Commission has issued the enclosed Exemption from the schedular requirements of Section III.A.6.(b) of Appendix J to 10 CFR Part 50 which allows delay of the performance of the Type A test until the next refueling outage and a return to the schedule of III.D if that test is successful. The basis for this exemption is contained in the enclosed Safety Evaluation.

A copy of the Exemption is being forwarded to the Office of the Federal Register for publication.

Sincerely,

*/s/ B. Gilbert for*

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

Enclosures:

- 1. Exemption
- 2. Safety Evaluation

Distribution

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| Docket File | NRC PDR              |
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cc: Plant Service List

See Previous Concurrence\*

<i>M. Virgilio</i> 9/15/87	IA: PD31: DRSP* R. INGRAM 8/5/87	PM: PD31: DRSP* TWAMBACH: dlm 8/6/87	D: PD31: DRSP* MJVIRGILIO 9/3/87	OGC* GJohnson 9/10/87	A/D: DRSP* GMHOLAHAN 9/4/87	D: <i>DMC</i> DMCRUTCHFIELD 9/17/87
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Mr. Kenneth W. Berry  
Consumers Power Company

Palisades Plant

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## III.

By letter dated August 22, 1986, the licensee requested an exemption to the requirements of Section III.A.6.(b) proposing an aggressive "Local Leak Rate Testing - Corrective Action Plan" in lieu of more frequent Type A tests. The licensee has stated that the failures of the Type A tests were the result of Type B and C penalty additions to the test results. The NRC staff confirmed this statement by reviewing the test reports and notes that the licensee has proposed and implemented a corrective action program consistent with NRC Office of Inspection and Enforcement Information Notice No. 85-71, issued August 22, 1985. This Information Notice provides guidance to licensees that states in circumstances as described above "... the general purpose of maintaining a high degree of containment integrity might be better served through an improved maintenance and testing program for containment penetration boundaries and isolation valves. In this situation, the licensee may submit a Corrective Action Plan with an alternative leakage test program proposal as an exemption request for NRC staff review. If this submittal is approved by the NRC staff, the licensee may implement the corrective action and alternative leakage test program in lieu of the required increase in Type A test frequency incurred after the failure of two successive Type A tests." In addition, the NRC staff notes that the results of the Type A tests, neglecting the addition of the penalties for the penetration leakages determined from the Type B and C tests, do not indicate any deterioration of the containment building and are typical of results of similar containment tests in the industry. Therefore, the NRC staff concludes that the Corrective Action Plan, including an augmented local leak rate test program and trending program, if properly carried out, would more efficiently detect and correct the types of excess leakage that have occurred in the past (i.e., penetration leakage). Further, the staff sees no benefit to be gained by requiring a

Type A test at this time since new equipment to correct the problems experienced during the January 1986 Type A test will not be available before June 1, 1988. The staff finds that for these circumstances, the licensee should be granted exemption from the 18-month restriction and further, that if the Type A test performed at the next refueling outage meets the acceptance criteria of Appendix J indicating the success of the Corrective Action Plan, the schedule for Type A tests may revert to that required under Section III.D of Appendix J. The Corrective Action Plan will continue in effect at least until the augmented local leak rate testing program produces consistently satisfactory results.

#### IV.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12(a), the requested exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. Further, the Commission finds that special circumstances are present in that application of the regulation in these particular circumstances would not serve the underlying purpose of the rule and is not necessary to achieve the underlying purpose of the rule, in that, as discussed in Section III., the proposed alternative better meets the purpose of correcting excess leakage and confirming low leakage on a more frequent test schedule. The exemption provides only temporary relief from the applicable regulation and the licensee has made good faith efforts to comply with the regulation by implementing an alternative program to achieve the underlying purpose of the rule. Therefore, the Commission hereby grants the following exemption from the requirements of Section III.A.6.(b) of Appendix J to 10 CFR Part 50:

1. The 18-month limit on the interval between the January 1986 Type A test and the next required Type A test is waived provided that the licensee appropriately implements the Local Leak Rate Testing Corrective Action Plan described in its letter dated August 22, 1986;
2. If the results of the next Type A test meet the acceptance criteria of Section III.A.5.(b), the next required test shall be in accordance with the requirements of Section III.D.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will have no significant impact on the environment (52 FR 32979).

A copy of the Commission's concurrently issued Safety Evaluation related to this action is available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. 20555, and at the local public document room located at the Van Zoeren Library, Hope College, Holland, Michigan 49428. A copy may be obtained upon written request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Reactor Projects - III, IV, V and Special Projects.

This Exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Dennis M. Crutchfield, Director  
Division of Reactor Projects - III,  
IV, V and Special Projects

Dated at Bethesda, Maryland this 17<sup>th</sup> day of Sept. , 1987.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING EXEMPTION FROM THE REQUIREMENTS OF 10 CFR 50, APPENDIX J

CONSUMERS POWER COMPANY

PALISADES PLANT

DOCKET NO. 50-255

1.0 INTRODUCTION

By letter dated August 22, 1986, the Consumers Power Company requested an exemption for the Palisades Plant from the requirements of 10 CFR Part 50, Appendix J, Section III.A.6.(b) to conduct a containment integrated leak rate test (Type A) approximately every 18 months until two consecutive Type A tests met the acceptance criteria of 0.75 Lt. This Safety Evaluation addresses the exemption request which the licensee bases on the fact that the previous as-found Type A test failures have been caused by containment penetration local leakage rates (Type B and C tests). The licensee proposed an aggressive "Local Leak Rate Testing - Corrective Action Plan," in lieu of more frequent Type A tests. This exemption request is consistent with the guidance given by the NRC Office of Inspection and Enforcement Information Notice No. 85-71, issued August 22, 1985.

2.0 EVALUATION

10 CFR Part 50, Appendix J, Section III.A.6.(b) requires that if two consecutive periodic Type A tests fail to meet the applicable acceptance criteria (in this case 0.75 Lt), a Type A test shall be performed at each plant shutdown for refueling or approximately every 18 months, whichever occurs first, until two consecutive Type A tests meet the acceptance criteria, after which time the retest schedule of three Type A tests at approximately equal intervals during each 10-year service period may be resumed.

The NRC staff reviewed the history of Type A tests conducted at the Palisades Plant and determined that the last three Type A tests as-found results have been failures as noted below:

- (a) March 1978                      Failed due to a leak in the 48" containment purge air exhaust penetration. This penetration has since been eliminated.
- (b) November 1981                  Failed due to leaks in penetrations No. 10 (service air), No. 33 (safety injection tank drain), and No. 52 (containment sump line).

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- (c) January 1986 Failed due to penetration No. 40 (post-accident sampling). Seventy-three percent of the test leakage was attributable to the leakage penalty for testable penetration leakage results. The remaining leakage from the Type A Test was less than 40 percent of the allowable.

In addition, the staff noted that several problems with test equipment were experienced during the performance of the January 1986 Type A test. The staff also notes that the results of the Type A Tests, neglecting the addition of the penalties for the penetration leakages determined from the Type B and C Tests, do not indicate any deterioration and are typical for similar containment tests in the industry.

The licensee's proposed Local Leak Rate Testing - Corrective Action Plan includes a detailed trending program to track penetration and valve performance, identification of valve's performance by type and manufacturer, implementation of appropriate repair/replacement of containment isolation valves identified as historically poor performers, and an augmented local leak rate testing program for those penetrations identified as poor performers.

During a visit to the Palisades Plant on June 9-10, 1987, the staff reviewed the licensee's implementation of the proposed Corrective Action Plan. The staff's review determined that the licensee has:

- (a) Performed a historical review of all penetrations tested since 1971, and has determined which of the penetrations/valves have been the major leakage rate contributors and those which have been the best performers.
- (b) Developed a local leak rate trending program and is enhancing the program through the acquisition of Parameter Manager software.
- (c) Implemented a program to conduct on-the-job training for the auxiliary operators who perform local leak rate tests, and has performed a review of all local leak rate test procedures.

In addition, the licensee is in the process of obtaining new test equipment/software needed to correct the problems experienced during the 1986 Type A test. According to the licensee, the new equipment will be available by June 1, 1988.

The staff also reviewed the historical records of all tested containment penetrations and determined that:

- (a) A few Type C tested penetrations (Nos. 11, 14, 33 and 39) have leaked excessively on more than one occasion and were repaired. In each instance, the event occurred prior to the implementation of the licensee's proposed Corrective Action Plan. However, as stated earlier, no penetration has ever caused a Type A test failure more than once.

- (b) Of the Type B tested penetrations, the escape airlock (No. 50), the south electrical penetration (No. 74), and steam generator manway penetrations (Nos. 75, 79 or 78) leaked excessively during 1986, as well as during previous years. These penetrations should receive additional licensee attention. The personnel airlock (No. 19) had a history of gross leakage from 1979 to 1985. Following modifications, adjustments, and replacements, the personnel airlock had performed well during its last four tests since 1985.
- (c) Presently there are no penetrations undergoing accelerated local leak rate testing which would require a plant shutdown to perform the test. Some penetrations are being Type C tested whenever a forced outage of extended duration occurs. Thirty-two tests involving 22 different penetrations out of 50 testable penetrations have been performed with the selection based on historical results of leakage testing.

### 3.0 CONCLUSION

Based on the above, the NRC staff concludes that while the licensee's proposed Corrective Action Plan appears to be in place, no corrective action, engineering evaluations, or augmented local leak rate testing have yet been required as a result of the Plan. Therefore, while the staff cannot correlate any improvement in containment penetration leakage rate testing performance to the Corrective Action Plan, the Plan, if properly carried out, should be able to detect and focus licensee resources on future bad performers. At the same time, the staff sees no benefit to be gained by requiring the licensee to perform a Type A test this year since the new equipment to correct the problems experienced during the January 1986 Type A test will not be available before June 1, 1988. Therefore, the staff will grant the licensee an exemption from the requirement that the next Type A test be performed at approximately 18-month intervals until two consecutive Type A tests meet the required acceptance criteria. The staff will require the licensee to perform its next Type A test at the next refueling outage presently scheduled after June 1, 1988. If the as-found Type A results are satisfactory, the licensee may return to the normal retest schedule of three Type A tests at approximately equal intervals during each 10-year service period. If the as-found Type A test results are unsatisfactory, the licensee will remain on the accelerated schedule required by 10 CFR Part 50, Appendix J, Section III.A.6.(b). The licensee may then resubmit, if they so wish, a new request for an exemption from the requirement of Section III.A.6.(b). The request should include the corrective actions taken or planned to improve penetration local leakage rate performance and the augmented Type B and C local leak rate testing planned to verify improved penetration performance.

### 4.0 ENVIRONMENTAL CONSIDERATION

An Environmental Assessment and Finding of No Significant Impact was issued on August 25, 1987, and published in the Federal Register on September 1, 1987 (52 FR 32979).

5.0 ACKNOWLEDGEMENT

This evaluation was prepared by F. Maura.

September 17, 1987

Dated