

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)	
NIAGARA MOHAWK POWER CORPORATION)	Docket No. 50-410
)	
(Nine Mile Point Nuclear Station)	
Unit 2))	

EXEMPTION

I.

Niagara Mohawk Power Corporation (NMPC or the licensee) is the holder of Facility Operating License No. NPF-69, which authorizes operation of Nine Mile Point Nuclear Station Unit 2 (the facility/NMP2), at a steady-state reactor power level not in excess of 3323 megawatts thermal. The facility is a boiling water reactor located at the licensee's site in Oswego County, New York. The license provides among other things, that it is subject to all rules, regulations, and Orders of the U.S. Nuclear Regulatory Commission (the Commission or NRC) now or hereafter in effect.

II.

Section III.D.1.(a) of Appendix J to 10 CFR Part 50 requires the performance of three Type A containment integrated leakage rate tests (ILRTs), at approximately equal intervals during each 10-year service period of the primary containment. The third test of each set shall be conducted when the plant is shutdown for the 10-year inservice inspection of the primary containment.

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III.

By letter dated March 9, 1995, NMPC requested temporary relief for NMP2 from the requirement to perform a set of three Type A tests at approximately equal intervals during each 10-year service period of the primary containment. The requested exemption would permit a one-time interval extension of the second Type A test by approximately 18 months (from the April 1995 refueling outage, to the late 1996 refueling outage).

The licensee's request cites the special circumstances of 10 CFR 50.12, paragraph (a)(2)(ii), as the basis for the exemption. The existing Type B and C testing programs are not being modified by this request and will continue to effectively detect containment leakage caused by the degradation of active containment isolation components as well as containment penetrations. The licensee has analyzed the results of the previous Type A tests performed at NMP2. Two Type A tests (including the preoperational test) have been conducted from 1986 to date with no failures. Therefore, application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule.

IV.

Section III.D.1.(a) of Appendix J to 10 CFR Part 50 states that a set of three Type A leakage rate tests shall be performed at approximately equal intervals during each 10-year service period.

The licensee proposes an exemption to this section which would provide a one-time interval extension for the second Type A test by approximately 18 months. The Commission has determined, for the reasons discussed below, that pursuant to 10 CFR 50.12(a)(1) this exemption is authorized by law, will



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not present an undue risk to the public health and safety, and is consistent with the common defense and security. The Commission further determines that special circumstances, as provided in 10 CFR 50.12(a)(2)(ii), are present justifying the exemption; namely, that application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule.

The underlying purpose of the requirement to perform Type A containment leak rate tests at approximately equal intervals during the 10-year service period, is to ensure that any potential leakage pathways through the containment boundary are identified within a time span that prevents significant degradation from continuing or becoming unknown. The NRC staff has reviewed the basis and supporting information provided by the licensee in the exemption request. The NRC staff has noted that the licensee has a good record of ensuring a leak-tight containment. All Type A tests have passed with significant margin and the licensee has noted that the results of the Type A testing have been confirmatory of the Type B and C tests which will continue to be performed. The licensee stated in its submittal that a visual internal and external inspection of the mechanical and structural integrity of the containment shell is completed during every refueling outage. The NRC staff considers these inspections provide an important added level of confidence in the continued integrity of the containment boundary.

The NRC staff has also made use of the information in a draft staff report, NUREG-1493, which provides the technical justification for the present Appendix J rulemaking effort which also includes a 10-year test interval for Type A tests. The integrated leakage rate test, or Type A test, measures



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overall containment leakage. However, operating experience with all types of containments used in this country demonstrates that essentially all containment leakage can be detected by local leakage rate tests (Type B and C). According to results given in NUREG-1493, out of 180 ILRT reports covering 110 individual reactors and approximately 770 years of operating history, only 5 ILRT failures were found which local leakage rate testing could not detect. This is 3 percent of all failures. This study agrees well with previous NRC staff studies which show that Type B and C testing can detect a very large percentage of containment leaks. The NMP2 experience has also been consistent with these results as previously noted.

The Nuclear Management and Resources Council (NUMARC), now the Nuclear Energy Institute (NEI), collected and provided the NRC staff with summaries of data to assist in the Appendix J rulemaking effort. NUMARC collected results of 144 ILRTs from 33 units; 23 ILRTs exceeded $1.0L_a$. Of these, only nine were not due to Type B or C leakage penalties. The NEI data also added another perspective. The NEI data show that in about one-third of the cases exceeding allowable leakage, the as-found leakage was less than $2L_a$; in one case the leakage was found to be approximately $2L_a$; in one case the as-found leakage was less than $3L_a$; one case approached $10L_a$; and in one case the leakage was found to be approximately $21L_a$. For about half of the failed ILRTs the as-found leakage was not quantified. These data show that, for those ILRTs for which the leakage was quantified, the leakage values are small in comparison to the leakage value at which the risk to the public starts to increase over the value of risk corresponding to L_a (approximately $200L_a$, as discussed in NUREG-1493). Therefore, based on these considerations, it is



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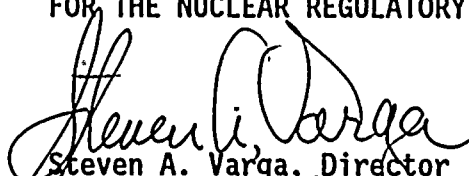
unlikely that an extension of one cycle for the performance of the Appendix J, Type A test at NMP2 would result in significant degradation of the overall containment integrity. As a result, the application of the regulation in these particular circumstances is not necessary to achieve the underlying purpose of the rule.

Based on generic and plant specific data, the NRC staff finds the basis for the licensee's proposed exemption to allow a one-time exemption to permit a schedular extension for NMP2 of one cycle for the performance of the Appendix J, Type A test, provided that the visual containment inspection is performed, to be acceptable.

Pursuant to 10 CFR 51.32, the Commission has determined that granting this Exemption will not have a significant impact on the environment (60 FR 17374).

This Exemption is effective upon issuance and shall expire at the completion of the late 1996 refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION



Steven A. Varga, Director
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 24th day of April 1995



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FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by:

Steven A. Varga, Director
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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B. Sylvia

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April 24, 1995

A copy of the Exemption is enclosed. The Exemption has been forwarded to the Office of the Federal Register for publication.

Sincerely,

Original signed by:

Ledyard B. Marsh, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-410

Enclosure: Exemption

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