

January 29, 1993

Docket No. 50-423

Mr. John F. Opeka
Executive Vice President, Nuclear
Connecticut Yankee Atomic Power Company
Northeast Nuclear Energy Company
Post Office Box 270
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Dear Mr. Opeka:

SUBJECT: EXEMPTION TO APPENDIX J - EXTENSION OF THE TYPE B AND C LEAK
RATE TEST PERIOD (TAC NO. M84951)

The Commission has issued the enclosed exemption from certain requirements of 10 CFR Part 50, Appendix J for the Millstone Nuclear Power Station, Unit 3 in response to your letter dated November 18, 1992. The exemption permits a one-time extension of the test period for the Type B and C tests from February 5, 1993, or later, until the next refueling outage, but no later than December 5, 1993.

A copy of the enclosed Exemption is being filed with the Office of the Federal Register for publication.

Sincerely,

Original signed by

Vernon L. Rooney, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:

1. Exemption

cc w/enclosure:

See next page

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Northeast Nuclear Energy Company

Millstone Nuclear Power Station
Unit 3

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)	
)	
NORTHEAST NUCLEAR ENERGY COMPANY)	Docket No. 50-423
)	
(Millstone Nuclear Power Station,)	
Unit 3))	
)	
)	

EXEMPTION

I.

Northeast Nuclear Energy Company (the licensee) is the holder of Facility Operating License No. NPF-49, which authorizes operation of Millstone Nuclear Power Station, Unit No. 3. The license provides, among other things, that the facility is subject to all rules, regulations, and orders of the Commission now or hereafter in effect.

The facility consists of a pressurized water reactor located at the licensee's site in New London County, Connecticut.

II.

One of the conditions of all operating licenses for water-cooled power reactors, as specified in 10 CFR 50.54(o), is that primary reactor containments shall meet the containment leakage test requirements set forth in 10 CFR Part 50, Appendix J. More specifically the following sections require that:

Section III.D.2.(a), "Type B Tests"

Type B tests, except tests for air locks, shall be performed during reactor shutdown for refueling or other convenient intervals but in no case at intervals greater than 2 years.

Section III.D.3, "Type C Tests"

Type C tests shall be performed during each reactor shutdown for refueling but in no case at intervals greater than 2 years.

III.

A. Exemption for Temporary Relief

By letter dated November 18, 1992, the licensee requested a one-time schedular exemption for the local leak rate tests (LLRTs) from the requirements of 10 CFR 50, Appendix J, Sections III.D.2(a) and III.D.3 to accommodate a schedule change for the next refueling outage. The request for exemption, if granted, would exceed the required Type B and C test interval by approximately 10 months. In addition, the licensee proposed Technical Specification (TS) changes to reflect the above cited exemption request. The staff's evaluation of the licensee's exemption request is provided in the Safety Evaluation dated January 29, 1993, supporting Amendment No. 75, and is summarized below.

At Millstone Unit 3, there are 84 Type B penetrations which require Type B testing. The licensee plans to test all of these penetrations in accordance with the schedule required by Appendix J, except for the fuel transfer canal blind flange that cannot be tested at power. A schedular exemption was requested for the fuel transfer canal blind flange, which was last tested on March 18, 1991.

There are 68 mechanical penetrations that require Type C testing. All but 37 of these were tested when opportunities occurred during outages in the

last year. Scheduler exemption for testing the remaining 37 penetrations were requested because they either cannot be tested during plant operation, or would cause a degradation in safety if tested during plant operation. All of these penetrations were tested during the 1991 refueling outage.

The Technical Specifications contain a combined leakage rate limit for all penetrations and valves subject to Type B and C testing. The last measurement of combined Type B and C leakage during the 1991 refueling outage was 37.5% of the Technical Specification limit. The projected leak rate at the end of the 10-month period, during which this exemption from Type B and C testing applies, would be less than 50% of Technical Specification limits for combined Type B and C leakage.

Based on the foregoing, the NRC staff concludes that a scheduler exemption is technically justified.

B. 10 CFR 50.12 Determinations for Special Circumstances

On January 22, 1991, and February 5, 1991, the licensee (Northeast Nuclear Energy Company) commenced the most recent containment LLRTs in accordance with the above Type B and C periodic testing requirements, respectively, for the Millstone Unit 3 during the 1991 refueling outage. As a result of an unusually long maintenance outage due to the service water system work and erosion/corrosion work during 1991, and two limited duration outages in 1992, the licensee has rescheduled the next refueling outage from November 1992 to approximately September 1993. With the new outage schedule, the opportunity for performing the required tests would exceed the required interval by about 10 months.

At Millstone Unit 3, there are 84 Type B penetrations which require Type B testing. Of the 84 penetrations, 80 are electrical penetrations which can be tested at power. The licensee is conducting Type B testing of these penetrations and plans to complete the testing prior to January 22, 1993. Of

the four remaining penetrations, two penetrations (the equipment hatch and equipment hatch manway) were tested on November 16, 1991 and January 28, 1992, respectively. The third penetration, the personnel air lock, is covered under TS Section 3.6.1.3 and is not the subject of this request. The fuel transfer canal blind flange which was tested (Type B) on March 18, 1991, is the only penetration that cannot be tested at power and will require an extension.

There are 68 mechanical penetrations that require Type C testing. In January, May and October 1992, while shut down, Type C testing was satisfactorily performed on 31 penetrations. This represents approximately 45% of the total Type C testing. The exemption request is only for the remaining penetrations (37) whose last Type C tests were performed during the last refueling outage.

The staff concludes that with the unplanned outages that have occurred, with the testing that has been performed to date, and with the licensee's commitment to perform additional testing during any forced outages of sufficient duration that may occur before the next refueling outage, the licensee's good faith efforts to comply with Appendix J have been demonstrated.

The time interval of 24 months, specified in Appendix J, was based, in part, on the expected degradation of components exposed to the environment resulting from a full 24 months of normal plant operation. The total exposure time for the containment penetration to normal plant operating environment will be only about 19 months with the requested exemption.

The 24-month interval requirement for Type B and C penetrations is intended to be often enough to prevent significant deterioration from occurring and long enough to permit the LLRTs to be performed during plant outages. In addition leak testing of the penetrations during plant shutdown

is preferable because of the lower radiation exposures to plant personnel. Moreover, some penetrations, because of their intended functions, cannot be tested at power operation. For penetrations that cannot be tested during power operation or those that if tested during plant operation would cause a degradation in the plant's overall safety (e.g., the closing of a redundant line in a safety system), the increase in confidence of containment integrity following a successful test is not significant enough to justify a plant shutdown specifically to perform the LLRTs within the 24-month time period, in light of the above discussions.

IV.

Pursuant to 10 CFR 50.12 (a)(2)(v), the Commission will not consider granting a schedular exemption unless the licensee has made good faith efforts to comply with the regulation. The NRC staff believes that the licensee has taken prudent steps to improve the containment integrity and, if not for the change in refueling outage schedule caused by unexpected outages, would have complied with Appendix J.

Based on our evaluation, the NRC staff has concluded that the licensee has made a good faith effort to comply with the requirements of Appendix J and that the special circumstances as described in 10 CFR 50.12(a)(2)(v) exist in that the exemptions would provide only temporary relief from the applicable regulations. Therefore, the staff has determined that the schedular exemptions from 10 CFR Part 50, Appendix J should be granted.

Accordingly, the Commission has determined that pursuant to 10 CFR 50.12, the exemption is authorized by law, will not endanger life or property or the common defense and security, and is otherwise in the public interest. Therefore, the Commission hereby approves the following exemption request.

A temporary exemption is granted from the requirements of Sections III.D.2.(a) and III.D.3, which require a local leak rate test to be conducted at intervals not greater than 24 months. For good cause shown, this exemption extends that interval by approximately 10 months from February 5, 1993, to the next refueling outage, but no later than December 5, 1993.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of these exemptions will have no significant impact on the quality of the human environment (58 FR 5035).

This exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by

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

Dated at Rockville, Maryland
this 29th day of January 1993

*See previous concurrence

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