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Docket No. 50-336

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Mr. Edward J. Mroczka
Senior Vice President
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Dear Mr. Mroczka:

SUBJECT: ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT - EXEMPTION FROM REQUIREMENTS OF APPENDIX J TO 10 CFR PART 50, PARAGRAPH III.A.3 AND CHANGES TO THE TECHNICAL SPECIFICATIONS (TAC NO. 66864)

Enclosed is the Environmental Assessment which relates to your request for exemption from certain requirements of 10 CFR 50, Appendix J and associated license amendment for Millstone Unit No. 2. The application for exemption from rule was dated December 23, 1987 and the application for license amendment was dated December 28, 1987 as supplemented by letter dated January 5, 1988.

This assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

"ORIGINAL SIGNED BY"

David H. Jaffe, Project Manager
Project Directorate I-4
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosure:
Environmental Assessment

cc w/enclosure:
See next page

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UNITED STATED NUCLEAR REGULATORY COMMISSION

NORTHEAST NUCLEAR ENERGY COMPANY

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

DOCKET NO. 50-336

ENVIRONMENTAL ASSESSMENT AND FINDING OF

NO SIGNIFICANT IMPACT

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from the requirements of Appendix J to 10 CFR Part 50 and an associated license amendment to Northeast Nuclear Energy Company, et al. (the licensee) for the Millstone Nuclear Station, Unit No. 2, located at the licensee's site in New London County, Connecticut.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action:

The licensee is requesting an exemption from Paragraph III.A.3 of 10 CFR Part 50 Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors." In 1973, Appendix J was issued to establish requirements for primary containment leakage testing and incorporated by reference, ANSI N45.4-1972, "Leakage Rate Testing of Containment Structures for Nuclear Reactors." This standard requires that containment leakage calculations be performed by using either the point-to-point method or the total time method. The total time method was used the most by the nuclear industry until about 1976.

At this time, licensees who wish to use mass-point must submit an application for exemption from the Appendix J requirement that containment integrated leak rate tests will conform to ANSI N45.4. The exemption proposed by the licensee would be granted until pending changes to Appendix J become

effective. In the mass-point method, the mass of air in containment is calculated and plotted as a function of time and leakage is calculated from the slope of the linear least squares.

With the present developments in technology, the mass-point method has gained increasing recognition.

The superiority of the mass-point method becomes apparent when it is compared with the two other methods. In the total time method, a series of leakage rates are calculated on the basis of air mass differences between an initial data point and each individual data point thereafter. If for any reason (such as instrument error, lack of temperature equilibrium, ingassing or outgassing) the initial data point is not accurate, the results of the test will be affected. In the point-to-point method, the leak rates are based on the mass difference between each pair of consecutive points which are then averaged to yield a single leakage rate estimate. Mathematically, this can be shown to be the difference between the air mass at the beginning of the test and the air mass at the end of the test expressed as a percentage of the containment air mass. It follows from the above that the point-to-point method ignores any mass readings during the test and thus the leakage rate is calculated on the basis of the difference in mass between two measurements taken at the beginning and at the end of the test, which are 24 hours apart.

The licensee's request and bases for exemption are contained in a letter dated December 23, 1987.

The licensee has also requested changes to the Technical Specifications that are related to the containment leak rate test. By application for license amendment dated December 28, 1987, as supplemented by letter dated January 5, 1988, the licensee requested changes to Millstone Unit 2 Technical Specification (TS) 4.6.1.2, "Containment Leakage" as follows: (1) the reference to ANSI Standard N45.4-1972 would be deleted and (2) the error analysis requirements would be modified to allow the use of alternate methods. The above changes to the TS have been proposed by the licensee to allow for use of ANSI/ANS Standard 56.8-1981 for "mass point" determination of containment leakage rate and for addressing the inherent errors associated with such testing, respectively.

A "Notice of Consideration of Issuance of Amendment to Facility Operating License and Opportunity for Prior Hearing" regarding the proposed changes to TS 4.6.1.2 was published in the Federal Register on January 12, 1988 (53 FR 766).

The Need for the Proposed Action:

The exemption and associated license amendment are needed to allow use of the mass-point analysis method at Millstone Unit No. 2 and for improved analysis of the test results.

Environmental Impacts of the Proposed Action:

The erraticism of the total time method creates a higher probability of unnecessarily failing a containment integrated leakage rate test (note that the calculational procedure is independent of containment tightness) possibly resulting in increased test frequency, critical path outage time, and exposure to test personnel. In addition, the proposed changes to the TS also allow use of improved methodology for analysis of test results.

Radiological releases will not be greater than previously determined, nor does the proposed exemption otherwise affect radiological plant effluents, or have any other environmental impact. Therefore, the Commission concludes that there are no measurable radiological or non-radiological environmental impacts associated with the proposed exemption and associated license amendment.

Alternative to the Proposed Action:

It has been concluded that there is no measurable impact associated with the proposed exemption and associated license amendment; any alternatives to the exemption and associated license amendment will have either no environmental impact or greater environmental impact.

Alternative Use of Resources:

This action does not involve the use of any resources beyond the scope of resources used during normal plant operation.

Agencies and Persons Consulted:

The Commission's staff reviewed the licensee's request that supports the proposed exemption. The staff did not consult other agencies or persons.

FINDING OF NO SIGNIFICANT IMPACT

Based upon the foregoing environmental assessment, the Commission concluded that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed exemption and associated license amendment.

For further details with respect to this action, see (1) the request for exemption dated December 23, 1987, (2) the application for license amendment dated December 28, 1987, as supplemented by letter dated January 5, 1988.

Copies of (1) and (2) are 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 Waterford Public Library, Rope Ferry Road, Route 156, Waterford, Connecticut 06385.

Dated at Bethesda, Maryland, this 3rd day of February 1988.

FOR THE NUCLEAR REGULATORY COMMISSION

John F. Stolz, Director
Project Directorate I-4
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation