NORTHEAST UTILITIES

THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

General Offices • Seldon Street, Berlin, Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06141-0270
(203) 666-6911

May 16, 1983

Docket No. 50-336
B10788

Director of Nuclear Reactor Regulation
Attn: Mr. Robert A. Clark
Operating Reactors Branch #3
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

References: (1) W. G. Counsil letter to R. A. Clark, dated April 13, 1983.

(2) W. G. Counsil letter to R. Reid, dated March 6, 1980.

(3) W. G. Counsil letter to R. A. Clark, dated November 17, 1981.

(4) W. G. Counsil letter to R. Reid, dated February 12, 1979.

(5) W. G. Counsil letter to R. A. Clark, dated October 22, 1982.

Gentlemen:

Millstone Nuclear Power Station, Unit No. 2
Cycle 6 - Refueling - Reload Safety Analyses
Proposed Revisions to Technical Specifications

In Reference (1), Northeast Nuclear Energy Company (NNECO) docketed the safety analyses and proposed revisions to the Technical Specifications in support of the Millstone Unit No. 2, Cycle 6 reload. The analyses and proposed Technical Specifications also provide for operation with up to 15.3% of the Steam Generator U-tubes plugged.

NNECO indicated in Reference (1) that we had not as yet finalized our determination concerning whether the proposed revisions to the Technical Specifications and Analyses presented therein constituted an unreviewed safety question. Pursuant to 10 CFR 50.59, NNECO has reviewed these changes and analyses and we present our conclusions herein.

The Millstone Unit No. 2 Reload Safety Analyses report presents an evaluation which demonstrates that the Cycle 6 core reload will not adversely affect the safe operation of the plant and includes effects due to the anticipated plugging of up to 2500 steam generator tubes. The plugging of these tubes would result in a decrease in primary reactor coolant flow and heat transfer area and a reduction in allowable values of the integrated radial peaking factor. Of the analyses presented in the Basic Safety Report (Reference (2)) and the Cycle 5

A001
1/0

RSA (Reference (3)), those incidents reanalyzed for Cycle 6 operation were the Control Rod Withdrawal event, the Loss of Reactor Coolant Flow event, and the Steamline Rupture event.

Reference (1) also docketed the in-house reanalysis of the Steam Generator Tube Rupture (SGTR) incident for a plugging level of 15.3%. Reference (4) presents the current licensing basis for this incident performed for the Cycle 3 power up rating to 2700 MW(th). The reanalysis of this event was submitted in support of anticipated plant operation with additional plugged U-tubes.

Considering the plant design changes resulting from the reload and the additional steam generator tube plugging, the reanalysis of the Loss of Reactor Coolant Flow event results in no increase in consequences from the previously docketed analyses. However, the reanalysis of the Control Rod Withdrawal event results in a slightly lower Departure from Nucleate Boiling Ratio (DNBR) and the reanalysis of the Steam Line Rupture event results in a slightly greater return to power. Since the consequences of these events have increased with respect to the current licensing basis as documented in Reference (3), the criterion of 10 CFR 50.59 (a)(2)(i) is not met and an unreviewed safety question exists for Millstone Unit No. 2, Cycle 6 operation.

The large and small break loss-of-coolant accident evaluations were docketed in Reference (5).

The reanalysis of the SGTR event results in an unreviewed safety question due to the increase in dose consequences from that previously docketed in Reference (4) and the Millstone Unit No. 2 FSAR. The two hour exclusion area boundary thyroid dose presented in Reference (4) is 0.006 Rem. The reanalysis performed for Cycle 6 operation yields a calculated thyroid dose of 0.24 Rem.

As previously reported in Reference (1), this increase is attributable to the modeling of the steam generator atmospheric steam dump valve operation coupled with a larger assumed initial steam generator secondary pressure. This results in direct steam releases to the atmosphere resulting in the larger offsite dose consequences. The larger assumed initial steam generator secondary side pressure was chosen to maximize the steam release through the dump valves, resulting in conservative offsite doses.

The Cycle 3 analysis did not result in steam dump releases to the atmosphere due to the assumed manual operation of the dump valves and lower assumed initial steam generator pressure used in order to conservatively maximize U-tube break flow.

For the Control Rod Withdrawal event and the Steam Line Rupture event, the results of the Cycle 6 safety analyses are well within the acceptable limits as defined by the Millstone Unit No. 2 Technical Specification bases and FSAR. Consequently, there is no nuclear safety concern with respect to the increased consequences of the Control Rod Withdrawal and the Steam Line Rupture incidents.

NNECO has reviewed the dose consequences resulting from the SGTR event and finds them acceptable. The calculated dose of 0.24 Rem to the thyroid is less than 0.1% of the 10 CFR 100 limit of 300 Rem. This is the limit for those SGTR events with an assumed pre-rupture iodine spike. For those events without a pre-rupture spike, the Standard Review Plan limit is 30 REM and the calculated dose was only 0.05 REM, less than 1% of the limit. The current Millstone Unit No. 2 Technical Specification limits for primary and secondary activity were used in the reanalysis. Since the results are still well within acceptable dose criteria, the current Technical Specification limits provide an acceptable margin of safety.

In summary, the reanalysis of certain events outlined above have been determined to result in increased consequences for Cycle 6 operation. As such, pursuant to 10 CFR 50.59(a)(2)(i), an unreviewed safety question exists for Millstone Unit No. 2, Cycle 6 operation. The actual increases in consequences, however, do not result in exceeding Technical Specification bases or FSAR criteria for Cycle 6 operation and are acceptable from a safety standpoint. Thus, the analyses submitted in Reference (1) support the changes proposed in Reference (1).

Although the Reference (1) license amendment application was docketed before May 6, 1983, we are nonetheless providing the following information regarding NRC requirements promulgated as interim final rules in 48 FR 14864 and 48 FR 14873.

NNECO has reviewed the above summarized analyses pursuant to the requirements of 10 CFR 50.91(a) and has determined that the analyses supporting Cycle 6 operation and the necessary proposed Technical Specification revisions docketed in Reference (1) involve no significant hazards consideration. This conclusion has been reached because the criteria delineated in 10 CFR 50.92 have not been compromised. That is, none of the proposed changes or analyses of Reference (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or create the possibility of a new or different kind of accident previously evaluated; or involve a significant reduction in a margin of safety. This proposed amendment falls within the envelope of example (vi) provided in 48 FR 14864 of amendments likely to involve no significant hazards consideration. While there is an increase in consequences, all results are well within the limits specified in the FSAR or 10 CFR 100.

In accordance with the requirements of 10 CFR 50.91(b), a copy of this document and Reference (1) is being provided to the State of Connecticut.

The Millstone Unit No. 2 Nuclear Review Board has reviewed and concurred with the above determinations and procedure.

We remain available to assist you further in this matter such that an expeditious review of the Reference (1) license amendment request can be completed to support continued operation of Millstone Unit No. 2.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

W. G. Counsil
Senior Vice President

cc: Mr. Arthur Heubner
Director, Radiation Control Unit
Department of Environmental Protection
State Office Building
Hartford, CT 06116

STATE OF CONNECTICUT)
) ss. Berlin
COUNTY OF HARTFORD)

My Commission Expires March 31, 1988

Then personally appeared before me W. G. Counsil, who being duly sworn, did state that he is Senior Vice President of Northeast Nuclear Energy Company, a Licensee herein, that he is authorized to execute and file the foregoing information in the name and on behalf of the Licensees herein and that the statements contained in said information are true and correct to the best of his knowledge and belief.

Marjorie D. Bolles
Notary Public