

# NORTHEAST UTILITIES



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

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April 13, 1983

Docket No. 50-336  
B10688

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

Gentlemen:

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

Attached please find the Reload Safety Analyses (RSA) submitted in support of the Millstone Unit No. 2, Cycle 6 reload. This report presents an evaluation for the Cycle 6 reload which demonstrates continued conformance to the design and safety limits of the plant.

In Reference (1), Northeast Nuclear Energy Company (NNECO) provided the NRC Staff with the Basic Safety Report (BSR). The BSR serves as the reference fuel assembly and safety analyses report for the use of Westinghouse fuel at Millstone Unit No. 2. References (3), (5) and (6) document the Staff's acceptability of this report. In Reference (4) NNECO presented the Staff with the Millstone Unit No. 2, Cycle 5, Reload Safety Analyses. The BSR, as supplemented by Reference (4), provided the basis to which the Cycle 6 reload was evaluated.

The Cycle 6 RSA provides the results of reviews of those incidents analyzed and reported in References (1) and (4), which could potentially be affected by the fuel reload. Cycle specific parameters were examined in the areas of core kinetics, CEA worths and core peaking factors. Furthermore, in anticipation of the potential for additional steam generator tube plugging as a result of pitting corrosion identified during the last refueling outage, all incidents have been reevaluated for a plugging level of 15.3% (2500 tubes). Of the analyses presented in the BSR and Cycle 5 RSA, the CEA Withdrawal at Power, Loss of Reactor Coolant Flow and Steam Line Rupture events were reanalyzed for Cycle 6. The results of these analyses are included as Attachment I.

The Steam Generator Tube Rupture (SGTR) incident has also been reevaluated for the Cycle 6 reload for a steam generator plugging level of 15.3%. Reference (2) presents the current licensing basis for this incident performed for the Cycle 3 power uprating to 2700 MW(th). The SGTR incident has been reanalyzed by NNECO utilizing inhouse capabilities. In performing the reanalysis, NNECO

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compared results of various cases with plant operational data and the current licensing basis analysis. In addition, several sensitivity studies were performed in order to verify that conservative assumptions are used. A total of 3 cases were investigated and are presented in Attachment 2.

First, an initial case (Case 1) is presented using input parameters similar to those of the Cycle 3 reference analysis. The results of Case 1 are compared to the Cycle 3 results. The agreement between these two analyses supports the methodology and gives credibility to the results of this effort. Case 2 is performed using Cycle 6 input parameters in which 15.3 percent of the steam generator tubes are assumed plugged. This case provides an assessment of the incremental effect due to additional plugged U-tubes and an increased steam generator secondary side pressure. Case 3 is performed to support Cycle 6 operation with a 15.3 percent steam generator tube plugging level and assumes limiting conditions for system operation and operator action consistent with the present operation of Millstone Unit No. 2. Results for both Cases 2 and 3 demonstrates a negligible change in the offsite dose consequences predicted for this event due to the additional steam generator tube plugging.

While performing the SGTR reanalysis, NNECO determined that the Cycle 3 reference analysis did not consider the impact of a high initial steam generator pressure and the atmospheric steam dump valves being in automatic. Details regarding this determination were transmitted to the Staff in Reference (8). The results of the SGTR analyses, presented here in support of Cycle 6 operation, are also applicable for the remainder of Cycle 5 operation and conservatively bounds the results of the Cycle 3 reference analysis.

Concerning the comments provided by the Staff in Generic Letter No. 83-11, NNECO considers the analysis of the SGTR presented in Attachment 2 to represent a thorough and complete evaluation utilizing appropriate models and well documented benchmarking. The conclusions for the SGTR event presented herein have not as yet been QA-verified. This verification is expected to be completed shortly, and you will be notified promptly when this process is done. Supporting information is available in our corporate offices for Staff review.

The effects of the Cycle 6 reload have been reviewed with respect to the design basis small and large break loss-of-coolant accident analyses. The results of these evaluations were docketed in Reference (7).

Cycle 6 operation necessitates certain changes to the Plant Technical Specifications. Therefore, pursuant to 10 CFR 50.90, Northeast Nuclear Energy Company (NNECO) hereby proposes to amend its operating license, DPR-65, by incorporating the revisions identified in Attachment 3 into the Millstone Unit No. 2 Technical Specifications. These revisions reflect changes in Cycle 6 operating characteristics. A discussion of each change is outlined in Attachment 4.

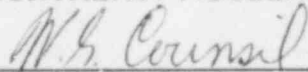
NNECO has not as yet finalized its determination concerning whether an unreviewed safety question exists as a result of analyses presented herein. We have concluded that the attached proposed Technical Specifications and analyses are acceptable from a safety standpoint, however we have not yet determined whether or not these changes constitute an unreviewed safety question pursuant to 10CFR50.59. This determination will be completed and submitted by May 9, 1983.

Pursuant to 10 CFR 170.22, NNECO has determined that this application to amend the Millstone Unit No. 2 license constitutes a Class IV amendment. The basis for this determination is that the Cycle 6 reload will involve several changes to the Millstone Unit No. 2. Technical Specifications of the Class III type. Accordingly, enclosed is the appropriate Class IV license amendment fee of \$12,300.

We trust you will find this information satisfactory.

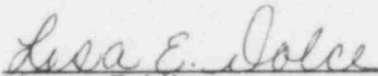
Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

  
W. G. Council  
Senior Vice President

STATE OF CONNECTICUT)  
COUNTY OF HARTFORD )

Then personally appeared before me W. G. Council, 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 statement contained in said information are true and correct to the best of his knowledge and belief.

  
Notary Public

My Commission Expires March 31, 1988

- Reference:
- (1) W. G. Counsil letter to R. Reid, dated March 6, 1980.
  - (2) W. G. Counsil letter to R. Reid, dated February 12, 1979.
  - (3) R. A. Clark letter to W. G. Counsil, dated June 22, 1981.
  - (4) W. G. Counsil letter to R. A. Clark, dated November 17, 1981.
  - (5) R. A. Clark letter to W. G. Counsil, dated January 12, 1982.
  - (6) R. A. Clark letter to W. G. Counsil, dated February 18, 1982.
  - (7) W. G. Counsil letter to R. Clark, dated October 22, 1982.
  - (8) E. J. Mroczka letter to R. C. Haynes, dated March 31, 1983.