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 • Selden Street, Berlin, Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06141-0270
(203) 665-5000

September 2, 1988

Docket No. 50-423
B13007
Re: 10CFR50.90

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

References: (1) E. J. Mroczka letter to U.S. Nuclear Regulatory Commission, Supplemental Information, RTD Bypass Elimination Licensing Report, dated December 23, 1987.

(2) R. L. Ferguson Letter to E. J. Mroczka, Issuance of Amendment, dated January 20, 1988.

Gentlemen:

Millstone Nuclear Power Station, Unit No. 3
Proposed Revision to Technical Specifications
Flow Measurement Uncertainty

Pursuant to 10CFR50.90, Northeast Nuclear Energy Company (NNECO) hereby proposes to amend Operating License No. NPF-49 by incorporating the changes identified in Attachment 1 into the plant Technical Specifications for Millstone Unit No. 3.

Specifically, the proposed changes will revise Technical Specification Sections 4.2.3.1.6, 4.2.3.2.6 and the bases for Technical Specification Section 3/4.2.4 (page B3/4 2-6) to state that the penalty for undetected fouling of the feedwater venturis of 0.1 percent will be added to the flow measurement uncertainty values if the venturis are not cleaned at least once per 18 months. This is to be done before the precision heat balance is made to calibrate the reactor coolant flow rate indicators (approximately once per 18 months).

Discussion

In a letter dated December 23, 1987 (Reference (1)), NNECO responded to the Staff's concerns related to effects of the venturi fouling on the calorimetric flow measurement. Specifically, NNECO stated that prior to the start of each cycle, the feedwater venturis will be verified to be clean by performing a visual inspection (borascope, photography, etc.) through inspection ports installed during the first refueling outage and cleaned when necessary. If the venturis are not cleaned, an additional 0.1 percent will be added to the total reactor coolant flow measurement uncertainty values. In addition, Technical Specification Sections 4.2.3.1.6, 4.2.3.2.6 and the corresponding

Acol w/check $150 #107755

bases section will be revised to reflect the above commitment and submitted to the NRC for approval. In Reference (2), the NRC required NNECO to submit the modified Technical Specifications prior to Cycle 3 operation.

The Millstone Unit No. 3 Technical Specifications (Sections 3.2.3.1 and 3.2.3.2) require that the indicated reactor coolant system (RCS) flow rate shall be greater than or equal to 385,210 gpm for four loop operation and 304,785 gpm for three loop operation. The corresponding flow measurement uncertainties are ±1.8 percent and ±2.0 percent for four and three loop operation respectively. These minimum indicated RCS flow rate values are obtained by increasing the thermal design flows of 378,400 gpm and 298,800 gpm for four and three loop operation, respectively, by their corresponding flow measurement uncertainties. When the 0.1 percent venturi fouling factor is added, the resulting flow measurement uncertainties are ±1.9 percent for four loop and ±2.1 percent for three loop operation. The Technical Specification minimum indicated RCS flow rate for these conditions is 385,590 gpm for four loop operation and 305,705 gpm for three loop operation. Therefore, this measured flow will still be greater than the minimum flow assumed in the design basis analysis. Therefore, the changes do not impact the consequences of any design basis accident.

Significant Hazards Consideration

In accordance with 10CFR50.92, NNECO has reviewed the proposed changes and concluded that they do not involve a significant hazards consideration. The basis for this conclusion is that the three criteria of 10CFR59.92(c) are not compromised. The proposed changes do not involve a significant hazards consideration because the changes would not:

1. Involve a significant increase in the probability or consequences of an accident previously analyzed. Application of a penalty factor will increase the acceptance criteria of the limiting condition for operation for the indicated or calculated RCS flow to take into account the potential for venturi fouling. This assures that the calculated RCS flow by heat balance method or indicated RCS flow will be greater than the RCS flow assumed in the design basis analysis. Therefore, the proposed changes do not impact the consequences of any design basis accident. The proposed changes do not have the potential to initiate any event, therefore, the changes do not increase the probability of occurrence of any design basis event.

2. Create the possibility of a new or different kind of accident from any previously analyzed. The proposed changes do not impact the operation of any component or system. The proposed changes do not introduce any new single failures. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from those previously analyzed.

3. Involve a significant reduction in a margin of safety. The proposed changes will require the addition of 0.1 percent penalty to the RCS flow measurement acceptance criteria if the feedwater flow venturis are not cleaned every 18 months. The RCS flow calculated by heat balance method will still be required to meet the Technical Specification limits. Therefore, the proposed change does not reduce the margin of safety.

Moreover, the Commission has provided guidance concerning the applications of standards set forth in 10CFR50.92 by providing certain examples (March 6, 1986, FR7751) of amendments that are considered not likely to involve a significant hazards consideration. The changes proposed herein are most closely enveloped by example (ii), a change that constitutes an additional limitation not presently included in the Technical Specifications. If the feedwater venturis are not inspected and cleaned, an additional 0.1 percent will be added to the total RCS flow measurement uncertainty values thereby increasing the acceptance criteria of the limiting condition for operation for the RCS flow. The calculated flow by heat balance measurement or indicated flow must meet the Technical Specification limits. This flow will be greater than the flow assumed in the design basis analysis. Therefore, the proposed changes do not impact the consequences of any design basis accident.

Based upon the information contained in this submittal and the environmental assessment for Millstone Unit No. 3, there are no significant radiological or nonradiological impacts associated with the proposed action, and the proposed license amendment will not have a significant effect on the quality of the human environment.

The Millstone Unit No. 3 Nuclear Review Board has reviewed and approved the proposed changes and has concurred with the above determination.

In accordance with 10CFR59.91(b), we are providing the State of Connecticut with a copy of this proposed amendment.

Pursuant to the requirements of 10CFR170.12(c), enclosed with this amendment request is the application fee of $150.00.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

E. J. Mroczka
Senior Vice President

cc: W. T. Russell, Region I Administrator
D. H. Jaffe, NRC Project Manager, Millstone Unit Nos. 2 and 3
W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2 and 3

Kevin McCarthy, Director
Radiation Control Unit
Department of Environmental Protection
Hartford, CT 06116

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

Then personally appeared before me, E. J. Mroczka, who being duly sworn, d' state that he is Senior Vice President of Northeast Nuclear Energy Company Licensee herein, that he is authorized to execute and file the forego information in the name and on behalf of the Licensees herein, and that ' statements contained in said information are true and correct to the best of his knowledge and belief.

Lynn M. Sheridan
Notary Public