

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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November 17, 1983

Docket No. 50-336

B10944

Director of Nuclear Reactor Regulation
Attn: Mr. James R. Miller, Chief
Operating Reactors Branch #3
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Gentlemen:

Millstone Nuclear Power Station, Unit No. 2
Supplement to the Reload Safety Analyses

In Reference (1), Northeast Nuclear Energy Company (NNECO) submitted a license amendment request and the Reload Safety Analyses (RSA) in support of the Millstone Unit No. 2, Cycle 6 reload. This report presented an evaluation for the Cycle 6 reload which demonstrated continued conformance to the design and safety limits of the plant.

By Reference (2), NNECO informed the Staff that due to elevated levels of radioactive iodine and other fission products identified during Cycle 5 operation, NNECO anticipated the discovery of a number of fuel assemblies with leaking fuel rods during the 1983 refueling outage.

Since that time, NNECO has performed fuel sipping identifying 26 fuel assemblies with failed fuel rods. In addition, visual examinations revealed 15 fuel assemblies to have broken holddown springs. Further, structural damage was observed in two assemblies, one of which also had a broken holddown spring. This damage was reported to the Staff in License Event Reports 50-336/83-25, 83-25/01-T, 83-26, and 83-26/01-T. The Staff is referred to Reference (3) for a detailed discussion of the fuel degradation and NNECO's efforts to support Cycle 6 operation of Millstone Unit No. 2.

As discussed in Reference (3), NNECO is replacing all leaking fuel assemblies with a combination of new and previously discharged fuel assemblies. These changes have necessitated a revised loading pattern for Cycle 6 operation. In addition, assemblies F37 and F73, which sustained some structural damage, will be replaced.

By Reference (4), NNECO reported damage to the thermal shield support system at Millstone Unit No. 2. The extent of this damage has resulted in the need for removal of the thermal shield from the core barrel for ultimate disposition of this component. Reference (5) provides details of NNECO's thermal shield damage recovery program.

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In order to assess the impact of a new loading pattern and the removal of the thermal shield, NNECO has had its fuel vendor reevaluate the Reference (1) Reload Safety Analyses in support of Millstone Unit No. 2 Cycle 6 operation. Attached are the results of this review provided as a supplement to the Reload Safety Analyses. This report confirms that the Cycle 6 reload design does not result in previously acceptable safety limits for any incident to be exceeded.

The attached supplement to our Reference (1) Cycle 6 RSA provides the results of reviews of those incidents analyzed and reported in the Cycle 6 RSA, Cycle 5 RSA and the Basic Safety Report, Reference (1), (6) and (7) respectively, which comprise the present licensing basis for Cycle 6 operation. Of the analyses presented in these documents, the Loss of Reactor Coolant Flow event was reanalyzed for the redesigned Cycle 6. The basis and results of this reanalysis are included in the attached supplement to the Cycle 6 RSA.

As was anticipated, no new technical specifications beyond those proposed in Reference (1) are needed to support Cycle 6 operation. Therefore, the License Amendment Request of Reference (1) remains valid.

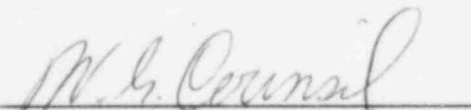
In considering the impact of the thermal shield removal and the new loading pattern, NNECO has reviewed the design basis Small and Large Break Loss of Coolant Accident analyses submitted in Reference (8). It has been determined that these events remain valid for Cycle 6 operation. Details regarding this determination have been provided to the staff in Reference (9).

NNECO is presently in the process of reviewing the Steam Generator Tube Rupture Event transmitted to the Staff in Reference (1) to determine what, if any, impact the revised core loading pattern or thermal shield removal have on the previously docketed results. NNECO is also evaluating the impact of information received regarding steam generator safety valve performance characteristics. The results of these evaluations will be addressed in separate correspondence to be docketed in the near future.

The present scheduled startup date for Millstone Unit No. 2 is on or about December 30, 1983. It is our understanding that the NRC fully intends to support this schedule. My Staff remains available to assist you in any way to facilitate your review.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



W. G. Council
Senior Vice President

- References:
- (1) W. G. Counsil letter to R. A. Clark, dated April 13, 1983.
 - (2) W. G. Counsil letter to R. A. Clark, dated June 22, 1983.
 - (3) W. G. Counsil letter to J. R. Miller, dated November 4, 1983.
 - (4) E. J. Mroczka letter to T. E. Murley, dated July 1, 1983.
 - (5) W. G. Counsil letter to J. R. Miller, dated September 15, 1983.
 - (6) W. G. Counsil letter to R. A. Clark, dated November 17, 1981.
 - (7) W. G. Counsil letter to R. Reid, dated March 6, 1980.
 - (8) W. G. Counsil letter to R. A. Clark, dated October 22, 1982.
 - (9) W. G. Counsil letter to J. R. Miller, dated November 2, 1983.