

# 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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September 28, 1982

Docket No. 50-336  
B10572

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

References: (1) W. G. Counsil letter to D. G. Eisenhower, dated  
April 16, 1982.

Gentlemen:

Millstone Nuclear Power Station, Unit No. 2  
Supplementary Information in Response  
to Generic Letter 82-05

In accordance with Item 2.1.6(b) of NUREG-0578 and Item II.B.2 of NUREG-0737, Northeast Nuclear Energy Company (NNECO) performed a plant shielding review for Millstone Unit No. 2 to determine what equipment lacked radiation qualification as well as those areas where personnel access would be prohibited due to high radiation fields, assuming the conservative source terms specified in NUREG-0737.

NNECO's response to Generic Letter No. 82-05, Reference (1), informed the NRC Staff that modifications to certain valves resulting from the plant shielding review would be completed during the 1983 refueling outage. In response to your verbal request, NNECO hereby provides the following information as justification for the additional time in which to complete the valve modifications.

The valve manipulations identified in Reference (1) are necessary to prevent the potential for boron precipitation following a large break loss-of-coolant accident in which the break is located in the cold leg. Assuming the Facility responds to the LOCA as assumed in the docketed safety analyses performed in accordance with 10CFR50.46 and Appendix K, the radiological source terms would be orders of magnitude less severe than that assumed in the plant shielding reviews. Utilizing the assumptions delineated in Appendix I to Regulatory Guide 4.2 Rev. 2, the exposure to an individual performing the valve manipulations described in Section 5.2 of Plant Operating Procedure 2214 would be approximately 28 rem. Regulatory Guide 4.2 is currently used in the preparation of environmental reports by applicants for operating licenses.

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This exposure is based on conservative estimates for valve stroke times. The calculation also assumed that the boron precipitation procedure is implemented two hours after the initiation of the accident. Since boron precipitation is not expected to be a concern for many hours into the event, the dose one would experience at that time is significantly less than 28 rem due to the decay of the short lived isotopes in the containment sump water.

NNECO considers this exposure acceptable for this post accident function and adds that the dose could be divided among at least four individuals to further reduce the impact of implementing the boron precipitation procedure.

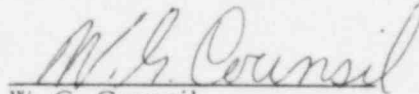
Justification for the additional time in which to complete the modifications to the valves identified in Reference (1) is based on the extremely low probability of occurrence of a design basis loss-of-coolant accident as a result of a reactor coolant system break of the size, location and orientation to necessitate use of the boron precipitation control procedure coupled with the conservative source term assumptions of NUREG-0737. Recent refinements in fracture mechanics, improved ISI techniques and "leak before break" concepts call into question the appropriateness of considering large, instantaneous breaks in the design bases of nuclear power plants.

Construction for the modifications to these valves to enable remote operation is scheduled to begin in early January, 1983. The modifications are expected to be completed prior to startup after refueling, currently scheduled to commence in April, 1983.

We trust you find this information satisfactory and responsive to your verbal request.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



W. G. Council  
Senior Vice President