



May 31, 1994

Docket No. 50-336  
B14850

Re: Generic Letter 88-20, IPE

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

Millstone Nuclear Power Station, Unit No. 2  
Response to Generic Letter 88-20  
Individual Plant Examination for Severe Accident Vulnerabilities  
Supplemental Information

In a letter dated December 30, 1993,<sup>(1)</sup> Northeast Nuclear Energy Company (NNECO) provided the report summarizing the Individual Plant Examination (IPE) for severe accident vulnerabilities for NNECO on behalf of Millstone Unit No. 2. The report, and the examination upon which the report was based, were conducted in response to Generic Letter (GL) 88-20. In the report, we identified one potential vulnerability and stated that a supplement to the IPE would be forwarded to the NRC upon completion and review of ongoing analysis associated with this potential vulnerability. The vulnerability involves the reactor coolant pump thermal barrier tube failure leading to possible overpressurization of the reactor building closed cooling water (RBCCW) system resulting in a small intersystem loss-of-coolant accident (LOCA). Our analysis has progressed to the point where a supplement to the IPE is appropriate.

As stated in the Millstone Unit No. 2 IPE, an initial review of the Millstone Unit No. 2 RBCCW system was performed to assess the existing level of risk associated with the potential overpressurization postulated in NRC Information Notice 89-54.<sup>(2)</sup> A 250 to 300 gpm leak at 1,000 to 2,000 psi primary coolant pressure was the initial assumption. Subsequent evaluation has shown the leak rate to be approximately 62 pounds mass per second at a differential pressure of 900 psid, equating to a flow rate of approximately 590 gpm.

- (1) J. F. Opeka letter to U.S. Nuclear Regulatory Commission, "Individual Plant Examination for Severe Accident Vulnerabilities, Summary Report," dated December 30, 1993.
- (2) Nuclear Regulatory Commission Information Notice 89-54, "Potential Overpressurization of the Component Cooling Water System," June 23, 1989.

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Two activities are ongoing to address this issue. First, a plant modification has been proposed in which relief valves would be installed, at appropriate locations, such that they would lift to prevent RBCCW pressure from exceeding that which would prevent containment isolation valve closure. A detailed analysis of the system configuration is being conducted to identify the appropriate number, location, and lift setpoint of these relief valves. A system walkdown will be conducted during the upcoming Cycle 12 refueling outage. Second, the motor-operated valves (MOVs) which serve to provide containment isolation are being evaluated to determine if modifications are appropriate so that these valves would have the capability to close against the differential pressure expected, should a reactor coolant pump thermal barrier tube rupture. This would provide added assurance that a reactor coolant pump thermal barrier tube rupture could be appropriately mitigated. If deemed necessary, relief valves and possibly MOV modifications, as appropriate, will be installed during the Cycle 13 outage, currently scheduled for June 1996.

We will keep you informed regarding our progress and are available to discuss this further if you wish. If you have any questions regarding this issue, please contact R. H. Young at (203) 665-3717.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

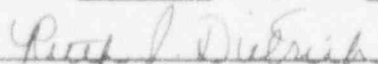
FOR: J. F. Opeka  
Executive Vice President

BY:   
E. A. DeBarba  
Vice President

cc: T. T. Martin, Region I Administrator  
G. S. Vissing, NRC Project Manager, Millstone Unit No. 2  
P. D. Swetland, Senior Resident Inspector, Millstone Unit  
Nos. 1, 2, and 3

Subscribed and sworn to before me

this 31st day of May, 1994



Date Commission Expires: 3/31/95