

OCT 06 1988

Docket No. 50-336

Mr. Edward J. Mroczka
Senior Vice President
Nuclear Engineering and Operations
Northeast Nuclear Energy Company
P. O. Box 270
Hartford, Connecticut 06141-0270

Dear Mr. Mroczka:

SUBJECT: MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2, REACTOR COOLANT PUMP
TRIP (RCP) (TAC NO. 49658)

We are in the process of reviewing your response concerning the post-accident trip of the RCPs (TMI Action Item II.K.3.5) for Millstone Unit 2. In order that we may complete our review, we request that you respond to the enclosed request for additional information within 60 days following receipt of this letter.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than 10 respondents; therefore, OMB clearance is not required under P. L. 96-511.

Sincerely,

David H. Jaffe, Project Manager
Project Directorate I-4
Division of Reactor Projects I/II

Enclosure:
Request for Additional
Information

cc: See next page

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ENCLOSURE

REQUEST FOR ADDITIONAL INFORMATION

MILLSTONE UNIT 2 REACTOR COOLANT PUMP TRIP

DOCKET NO. 50-336

Northeast Nuclear Energy Company's (NNECO's) response to Generic Letter (GL) 86-06 for Millstone, Unit 2, was contained in References 1, 2, and 3. The information supplied in these submittals provided the basis of the review by the NRC staff and their consultant, EG&G Idaho, Inc.

Millstone, Unit 2, is a Combustion Engineering (CE) plant, and in their submittals NNECO stated it endorsed the CE Owners Group (CEOG) reports, and the trip two pumps/leave two pumps (T2/L2) strategy developed by the CEOG.^{4,5} NNECO trips the first two pumps if the primary system pressure drops below 1600 psia. However, the second two pumps are tripped if the primary system subcooling drops below 30°F. Use of a single setpoint, subcooling, to trip the second two pumps is different than the recommendations of the CEOG in References 4 and 5. The CEOG stated in these references that a criterion for tripping the second set of pumps based on two parameters was required in order to distinguish between small break loss-of-coolant accidents (SBLOCAs), where pump trip is required, and non-LOCAs where it is desirable to keep the pumps running. In Reference 3, NNECO stated that for some steam generator tube ruptures (SGTRs) the second set of pumps will be tripped because primary subcooling would be lost. NNECO argued this was acceptable because the pumps are not required to mitigate a SGTR. In addition, during a conference call on March 23, 1988 between NNECO, the NRC staff, and EG&G Idaho, NNECO stated that the SGTRs for which the pumps would be tripped included the design basis SGTR (one tube).

The fact that the second two pumps would be tripped at Millstone, Unit 2, during the design basis SGTR contradicts the NRC requirements stated in SECY-82-475.⁶ SECY-82-475 states, "The resolution provided in the enclosures [Generic Letter 83-10] is intended to ensure that for whatever mode of pump operation a licensee elects, a) a sound technical basis for that decision exists, b) the plant continues to meet the Commission's rules and regulations, and c) as a minimum, the pumps will remain running for those non-LOCA transients and accidents where forced convection cooling and pressurizer pressure control would enhance plant control. This would include steam generator tube ruptures up to approximately the design basis event (one tube)." Thus, the use of the single parameter to trip the second two pumps at Millstone, Unit 2, does not meet the NRC staff requirement that the pumps remain running for the design basis steam generator tube rupture. The staff considers that a second parameter is required to make the approach acceptable.

In summary, the use of NNECO of a single parameter to trip the second set of pumps at Millstone, Unit 2, is not consistent with the CEOG position that two parameters are required to distinguish between SBLOCAs and non-LOCAs. It also does not meet the NRC staff requirement in SECY-82-475 that the pumps remain running for the design basis steam generator tube rupture event. The licensee is required to justify this inconsistency to the CEOG position using approved analytical methods or propose acceptable alternatives.

- References:
1. Letter from J. F. Opeka, Northeast Nuclear Energy Company (NNECO), to A. C. Thadani (USNRC), "Response to Generic Letter 86-06, Manual Trip of Reactor Coolant Pumps," NNECO letter No. B12313, November 13, 1986.
 2. Letter from E. J. Mroczka (NNECO) to USNRC, "Response to Generic Letter 86-06, Additional Information on Manual Trip of Reactor Coolant Pumps," NNECO letter No. B12395, January 9, 1987.
 3. Letter from E. J. Mroczka (NNECO) to USNRC, "Millstone Nuclear Power Station, Unit No. 2, Additional Information on Reactor Coolant Pump Trip (TAC No. 49658)," March 3, 1988.
 4. Combustion Engineering Nuclear Power Systems Division, "Justification of Trip-Two/Leave-Two Reactor Coolant Pump Trip Strategy During Transients," (Prepared for the C-E Owners' Group) Combustion Engineering report CEN-268, March 1984.
 5. Combustion Engineering Nuclear Power Systems Division, "Response to NRC Request for Additional Information on CEN-268," (Prepared for the C-E Owners' Group) Combustion Engineering report CEN-268, Supplement 1-NP, November 1984.
 6. W. J. Dircks, Executive Director for Operations, USNRC, "Staff Resolution of the Reactor Coolant Pump Trip Issue," SECY-82-475, NRC Accession Number 8306030370, November 30, 1982.