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April 20, 1994

Docket No. 50-336  
B14812

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

Millstone Nuclear Power Station, Unit No. 2  
Reply to a Notice of Violation  
Inspection Report Nos. 50-336/94-04 and 50-423/94-04

In a letter dated March 11, 1994,<sup>(1)</sup> the NRC Staff transmitted Notice of Violation (NOV) relating to NRC Inspection Report Nos. 50-336/94-04 and 50-423/94-04. The report discussed the results of the safety inspection of plant operations conducted from January 31, to February 11, 1994, at Millstone Unit Nos. 2 and 3. The inspectors concluded that surveillance testing of auxiliary feedwater system valves at Millstone Unit No. 2 was in violation of NRC requirements.

The Staff requested that Northeast Nuclear Energy Company (NNECO) respond within 30 days of the date of the letter transmitting the NOVs. However, during a discussion between NNECO and Region I Staff on April 6, 1994, it was agreed that the response would be provided on April 20, 1994. Although the Inspection Report stated that NNECO's response should be submitted under oath or affirmation, the Staff withdrew this request during a telephone conversation on April 7, 1994. Accordingly, Attachment 1 to this letter provides NNECO's reply to the violation, on behalf of Millstone Unit No. 2, pursuant to the provisions of 10CFR2.201.

(1) G. W. Meyer letter to J. F. Opeka, "Inspection Report Nos. 50-336/94-04 and 50-423/94-04," dated March 11, 1994.

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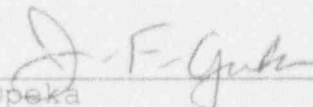
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Should you have any questions, please contact Mr. R. H. Young, Jr. at (203) 665-3717

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

  
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J. F. Opeka  
Executive 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

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Attachment 1

Millstone Nuclear Power Station, Unit No. 2

Reply to a Notice of Violation  
Inspection Report Nos. 50-336/94-04 and 50-423/94-04

April 1994

Millstone Nuclear Power Station, Unit No. 2

Reply to a Notice of Violation  
Inspection Report Nos. 50-336/94-04 and 50-423/94-04

Restatement of Violation:

During an NRC inspection conducted at Millstone Unit 2 from January 31 to February 11, 1994, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, the violation is listed below:

10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition.

Contrary to the above, on January 18, 1994, during the performance of Surveillance Procedure SP-2610A, a condition adverse to quality, the malfunction of both auxiliary feedwater regulating valves, 2FW-43-A and 2FW-43-B, occurred, but the malfunctions were neither promptly identified as representing inoperable conditions nor corrected. Despite the significance of both valves being inoperable, the cause was not determined nor were corrective actions taken to preclude repetition. The specific performance deficiencies were as follows:

1. Following excessive stroke timing, the valves were not placed in a safe position to maintain the operable status of the auxiliary feedwater system and technical specification actions were not followed;
2. The cause and extent of the failure was not determined prior to the conclusion of troubleshooting; for example, inspection of the controller for debris was not done and accident positioning of the valve was not verified;
3. Surveillance data forms, 2610A-1 and 2610A-2, were signed as completed satisfactorily, without comment, following the excessive stroke times displayed by both regulating valves;
4. Having found the operating air pressure of the tested valves above design, no action was taken to ensure the reliability of similar air control valves.

This is a Severity Level IV violation (Supplement I).

1. Reason for the Violation:

Operations Department personnel were performing stroke testing of remotely operated auxiliary feedwater regulating valves (AFRVs) pursuant to Technical Specification 4.7.1.2.a.4 when it was noted that the response of 2-FW-43A and B were somewhat longer than expected. This surveillance, which strokes the valves' normal operational function, simply exercises the valves through one complete cycle to demonstrate the operability of the auxiliary feedwater pumps. 2-FW-43A/B do not have a technical specification limiting condition for operation (LCO).

Operations Department personnel did not place the valve in the conservative position when doubt existed about the operability status. This doubt was caused by unclear operability requirements. As the surveillance being performed was successfully completed, the valves were considered operable during the time in question.

Technical Support Engineering personnel were immediately contacted for assistance and the applicable inservice test (IST) acceptance criteria referenced for guidance on operability. The IST only tests the valve normal operational function; not the safety function which utilizes different air venting components in the valve actuator.

Reviewing the valves' safety function, the bases for the IST operational function acceptance criteria, and the auxiliary feedwater pumps technical specifications led to a delay in immediately declaring the valves inoperable and placing them in their accident position.

This event was discussed in detail in Licensee Event Report 94-001-00, dated February 17, 1994.<sup>(2)</sup>

2. Corrective Steps Taken and the Results Achieved:

On January 18, 1994, immediately following the failure of the AFRVs to open in the IST required time, unit personnel responded by issuing automated work orders (AWO) to verify, and adjust as necessary, the air pressures associated with positioner and valve actuator supplies. As the retest for the AWOs, an IST was performed with satisfactory results for

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(2) D. B. Miller letter to the U.S. Nuclear Regulatory Commission, "Facility Operating License No. DPR-65 Docket No. 50-336 Licensee Event Report 94-001-00," dated February 17, 1994.

both valves. At that time it was noted that the apparent slow bleed off of the actuator air pressure, by the positioner through the normal vent path, would have no affect on the vent path through the accident condition quick opening solenoid dump valve. This information and the lack of guidance in the auxiliary feed pumps technical specifications for AFRVs, led to a delay in immediately declaring the valves inoperable. The Engineering Operability Evaluation was completed within 40 hours. Because a definite cause for the delay in opening of one valve could not be immediately identified, a plan to demonstrate operability through increased surveillance testing was established, while further corrective actions were being pursued. A "Probable Cause and Action Plan" was then developed and approved. These planned corrective actions included the following:

- (1) Establish "as-is" conditions for both AFRVs - Although repeated surveillance testing indicated normal valve operation, computerized valve testing (Air-CET) was contracted to detect misoperation without removing this cooldown flow-path from service. This test was developed to pinpoint possible non-recurring problems with either the valve positioner or the valve internals. After administrative controls were established, both AFRVs were tested with the 'A' valve showing some internal resistance to opening. Recommendations of the test vendor were followed to continue frequent surveillance testing.
- (2) Perform IST for the accident solenoid actuated valve opening - Since the accident condition opening capability of these valves is only tested off line, once per refuel cycle, a method to test the valves during power operation was devised, proceduralized, and completed. This demonstrated that the valves would open rapidly, utilizing the accident condition quick opening solenoid dump valve and, in an actual situation, pump pressure below the valve plug will also aid in rapid opening. These times favorably compared to the most recent refuel surveillance test times of December 1992.
- (3) Positioner Inspection - The valve positioner would be inspected for indications that debris may have built up and then blown clear with the successive stroke test following the delayed opening on January 18, 1994.
- (4) Valve Internal Inspection - Provided that demonstrated performance had continued, the valve internals were to

be inspected during the next opportunity while in Mode 5 or 6.

After a second delay in opening subsequently occurred, Steps (3) and (4) were completed immediately as part of 'A' valve disassembly. At that time, the valve stem/plug and cage assemblies were replaced and the valve retested by the Air-CET method to ensure that no internal resistance to opening remained during accident or non-accident opening methods. No evidence of residual debris was found in the positioner, and all surveillance tests were completed satisfactorily with the Air-CET monitoring valve performance.

The shift supervisors and supervising control operators were counseled that when the operability of a technical specification component is in question, immediate action must be taken to declare the component inoperable, log into the appropriate action statement, and follow the guidance provided. Specific guidance was provided to all shift supervisors on applicable technical specifications and/or compensatory actions to take if the operability of 2-FW-43A or B is in question. The operators involved were also counseled on the need to include relevant comments on the surveillance data sheets.

3. Corrective Steps That Will Be Taken to Avoid Further Violations:

The need for corrective action to prevent recurrence of the air pressure adjustment issue was recognized at the onset of the first valve stroke difficulty. A separate Plant Information Report was generated on January 24, 1994, in recognition of the potential safety significance of this issue. A multiple department coordinated effort is in progress to identify and implement a number of program improvements. These activities are being monitored and tracked by the Plant Operations Review Committee.

4. Date When Full Compliance Will be Achieved:

NNECO is presently in full compliance. Full compliance was achieved when 2-FW-43A was successfully leak tested on March 21, 1994.

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5. Generic Implications:

This NOV reply will be reviewed by the Millstone Unit Nos. 1 and 3, and Haddam Neck Technical Support Managers. Subsequent actions will be taken as appropriate.