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The Northeast Utilities System

OCT. 11, 1989

Docket No. 50-336
B17825

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

Millstone Nuclear Power Station, Unit No. 2
Corrections to the Millstone Unit No. 2 Inservice Test Program
for Pumps and Valves, Revision 7

The purpose of this letter is to provide the Nuclear Regulatory Commission (NRC) with corrections to the Millstone Unit No. 2 Inservice Test Program (IST) for Pumps and Valves, Revision 7, Section VI, Alternate Test Justification (ATJ). Northeast Nuclear Energy Company (NNECO) submitted this Program to the NRC in a letter dated March 5, 1999.⁽¹⁾ The corrections affect ATJs 008, 009, 013, 035, 036, 038, 039, 040, 045, 049, and 052. The corrected ATJs, enclosed as Attachment 1 to this letter, are provided to replace the corresponding pages in the Millstone Unit No. 2 IST for Pumps and Valves, Revision 7.

The NRC has reviewed the Millstone Unit No. 2 IST Program for Pumps and Valves, Revision 7. Based on the comments received by NNECO from the NRC, the following changes to Section VI, Alternate Test Justification, were implemented:

1. Alternate Test Justification, ATJ-008/009/013/035/036/038/040/045

The basis incorrectly referenced GL 89-04⁽²⁾ position 1. The ATJ bases were corrected identifying GL 89-04 position 2 as the reference that refers to sample disassembly of valves as an acceptable testing alternate.

⁽¹⁾ R. P. Necci to the Nuclear Regulatory Commission, "Millstone Nuclear Power Station, Unit No. 2, A Change in the End Date for the Second Ten-Year Interval and the Start Date for the Third Ten-Year Interval of the Inservice Test Program and the Inservice Inspection Program," dated March 5, 1999.

⁽²⁾ Generic Letter No. 89-04, "Guidance on Developing Acceptable Inservice Testing Programs," dated April 3, 1998.

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2. Alternate Test Justification, ATJ-039

Reference to GL 89-04 position 1 was deleted and the basis revised to correctly reflect the 2-SI-008 valve as a valve that is stroke tested and not disassembled each refueling.

3. Alternate Test Justification, ATJ-049 and ATJ-052

Valves listed in the ATJs are not part of a sample group. They are single valves tested each refueling operation. The original alternate test implied that it was part of a group. The Alternate Test Section was revised to reflect that a single valve is to be disassembled each refueling.

There are no regulatory commitments contained within this letter.

If there are any questions concerning this letter, please contact Mr. Ravi Joshi at (860) 440-2080.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

R. P. Necci
Vice President - Nuclear Oversight and
Regulatory Affairs

Attachment

cc: H. J. Miller, Region I Administrator
R. B. Eaton, NRC Senior Project Manager, Millstone Unit No. 2
D. P. Beaulieu, Senior Resident Inspector, Millstone Unit No. 2

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Attachment 1

Millstone Nuclear Power Station, Unit No. 2

Inservice Test Program For Pumps and Valves, Revision 7, Corrected Pages

July 1999

ATJ Number: 008

Valve Id: 2-SI-114 2-SI-124 2-SI-134 2-SI-144

Category: C

Class: 2

Open Safety Function: Open to provide an injection path from the Refueling Water Storage Tank to the reactor vessel.

Close Safety Function: Close to prevent overpressurization of Low Pressure Safety Injection System during normal operation and post-accident High Pressure Safety Injection System injection. Close to prevent diversion of High Pressure Safety Injection System water away from the reactor vessel after SRAS when the Low Pressure Safety Injection System pumps are not operating.

Basis For Deferral: Valves cannot be full stroke or part stroke exercised open using normal injection path during reactor operations since the LPSI pumps cannot overcome Safety Injection Tank pressure downstream of the 2-SI-706(series) valves. Verifying close function during reactor operation or cold shutdown would expose the LPSI system to potential overpressurization.

2

OM-10 permits deferral of testing to Cold Shutdown if it is impractical to conduct testing quarterly during operation and to Refueling if it is impractical to conduct testing quarterly while in operation or during cold shutdown.

OM-10 permits verification of check valve operability by disassembly each refueling outage if obturator movement cannot be verified during operation, cold shutdown or refueling.

Generic Letter 89-04, NRC Staff Position 2 authorizes sample disassembly of check valves when the licensee determines that it is burdensome to disassemble and inspect all applicable valves each refueling.

NUREG-1482 section 4.1.2 authorizes sample non-intrusive testing after an initial non-intrusive test of all valves in a group.

Comments:

<u>Required Tests</u>	<u>Frequency</u>	<u>Alternate Test</u>
Full Stroke Closed	Quarterly	Full Stroke Closed Refueling if Non-Intrusive Testing Available, Otherwise Disassemble, Inspect. Stroke one valve each refueling
Full Stroke Open	Quarterly	Full Stroke Open - Cold Shutdown

ATJ Number: 009

Valve Id: 2-SI-215 2-SI-225 2-SI-235 2-SI-245

Category: C

Class: 1

Open Safety Function: Open to provide borated water form the Safety Injection Tank to the reactor vessel following Reactor Coolant System depressurization as a result of a LOCA.

Close Safety Function: Close to provide reactor coolant pressure boundary between the RCS and the Safety Injection Tanks.

Basis For Deferral: Valve cannot be full stroke or part stroke exercised during operation or cold shutdown since there is no discharge path capable of accepting the flow. Valve cannot be full stroke exercised during refueling since the tanks cannot be safely discharged with full nitrogen overpressure. At lower nitrogen pressures full design flow may be achieved.

2

If practicable, valve will be tested with non-intrusive testing to verify function. If non-intrusive testing is impractical or unsuccessful, one valve in each group will be disassembled, inspected, and tested each refueling - not to exceed a six year interval between individual valve inspections.

OM-10 permits verification of check valve operability by disassembly each refueling outage if obturator movement cannot be verified during operation, cold shutdown or refueling.

Generic Letter 89-04, NRC Staff Position 2 authorizes sample disassembly of check valves when the licensee determines that it is burdensome to disassemble and inspect all applicable valves each refueling.

NUREG-1482 section 4.1.2 authorizes sample non-intrusive testing after an initial non-intrusive test of all valves in a group.

Comments:

<u>Required Tests</u>	<u>Frequency</u>	<u>Alternate Test</u>
Full Stroke (Open and Closed)	Quarterly	Full Stroke - Refueling if Non-Intrusive Testing Available, Otherwise Disassemble, Inspect, Stroke one valve each refueling

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Third Ten Year Interval
Revision 7 Change 2
25 June 1999

Millstone Unit 2 Alternate Test Justifications

ATJ Number: 013

Valve Id: 2-FW-5A 2-FW-5B

Category: C

Class: 2

Open None

Safety Function:

Close Close to prevent diversion of auxiliary feedwater back through the feedwater system. Valves are normally open.

Safety Function:

Basis Valve exercise during reactor operation would require stopping feed flow to the steam generator with consequent plant shutdown. Valve has no part stroke capability.

For Deferral:

OM-10 permits deferral of testing to Cold Shutdown if it is impractical to conduct testing quarterly during operation and to Refueling if it is impractical to conduct testing quarterly while in operation or during cold shutdown.

OM-10 permits verification of check valve operability by disassembly each refueling outage if obturator movement cannot be verified during operation, cold shutdown or refueling.

Generic Letter 89-04, NRC Staff Position 2 authorizes sample disassembly of check valves when the licensee determines that it is burdensome to disassemble and inspect all applicable valves each refueling.

2

Comments:

<u>Required Tests</u>	<u>Frequency</u>	<u>Alternate Test</u>
Full Stroke Closed	Quarterly	Disassemble, Inspect, Stroke Test one valve each refueling

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Third Ten Year Interval
Revision 7 Change 2
25 June 1999

Millstone Unit 2 Alternate Test Justifications

ATJ Number: 035

Valve Id: 2-CS-5A 2-CS-5B

Category: AC

Class: 2

Open Safety Function: Open to provide Refueling Water Storage Tank or containment sump water to the containment spray header.

Close Safety Function: Close to provide containment isolation for penetration 5.

Basis For Deferral: Valves cannot be full stroke or part stroke exercised during reactor operation, cold shutdown or refueling since passage of water through the valve would cause wetting of containment. Disassembling all valves which cannot be stroke tested would be unduly burdensome, creating unwarranted personnel exposure and impacting outage work completion.

OM-10 permits deferral of testing to Cold Shutdown if it is impractical to conduct testing quarterly during operation and to Refueling if it is impractical to conduct testing quarterly while in operation or during cold shutdown.

OM-10 permits verification of check valve operability by disassembly each refueling outage if obturator movement cannot be verified during operation, cold shutdown or refueling.

Generic Letter 89-04, NRC Staff Position 2 authorizes sample disassembly of check valves when the licensee determines that it is burdensome to disassemble and inspect all applicable valves each refueling.

2

Comments:

<u>Required Tests</u>	<u>Frequency</u>	<u>Alternate Test</u>
Full Stroke (Open and Closed)	Quarterly	Disassemble, Inspect, Stroke Test one valve each refueling

ATJ Number: 036

Valve Id: 2-CS-14A 2-CS-14B

Category: A

Class: 2

Open Open to provide borated water from the Refueling Water Storage Tank to the High
Safety Function: Pressure Safety Injection, Low Pressure Safety Injection, and Containment Spray pumps.

Close Close to prevent diversion of containment sump water to the Refueling Water
Safety Function: Storage Tank during containment recirculation.

Basis Valves cannot be full stroke exercised during reactor operation because the only full
For Deferral: flow path is into the Reactor Coolant System. There are no pumps capable of providing design flow during reactor operation. Valves cannot be full stroke exercised during cold shutdown since Reactor Coolant System overpressurization could result.

2

OM-10 permits deferral of testing to Cold Shutdown if it is impractical to conduct testing quarterly during operation and to Refueling if it is impractical to conduct testing quarterly while in operation or during cold shutdown.

OM-10 permits verification of check valve operability by disassembly each refueling outage if obturator movement cannot be verified during operation, cold shutdown or refueling.

Generic Letter 89-04, NRC Staff Position 2 authorizes sample disassembly of check valves when the licensee determines that it is burdensome to disassemble and inspect all applicable valves each refueling.

Comments:

<u>Required Tests</u>	<u>Frequency</u>	<u>Alternate Test</u>
Full Stroke Closed	Quarterly	Full Stroke - Refueling if Non-Intrusive Testing Available, Otherwise Disassemble. Inspect, Stroke one valve each refueling
Full Stroke Open	Quarterly	Part Stroke Open Operating- Full Stroke Open Refueling

ATJ Number: 038

Valve Id: 2-SI-009 2-SI-010 2-SI-011 2-SI-012 2-SI-113 2-SI-123 2-SI-

Category: C

Class: 2

Open Safety Function: Open to provide Refueling Water Storage Tank or containment sump water path to the reactor vessel.

Close Safety Function: Close to prevent diversion of flow to an out-of-service High Pressure Safety Injection System injection line.

Basis For Deferral: Valves cannot be full stroke exercised during reactor operation since the only full flow path is into the Reactor Coolant System. HPSI pumps do not have sufficient discharge pressure (1200 PSIG) to overcome Reactor Coolant System pressure (2250 PSIA). Valves cannot be full stroke exercised during cold shutdown since full HPSI flow into the Reactor Coolant System could result in overpressurization.

2

OM-10 permits deferral of testing to Cold Shutdown if it is impractical to conduct testing quarterly during operation and to Refueling if it is impractical to conduct testing quarterly while in operation or during cold shutdown.

OM-10 permits verification of check valve operability by disassembly each refueling outage if obturator movement cannot be verified during operation, cold shutdown or refueling.

Generic Letter 89-04, NRC Staff Position 2 authorizes sample disassembly of check valves when the licensee determines that it is burdensome to disassemble and inspect all applicable valves each refueling.

Comments: Close Test by Non-Intrusive Testing

<u>Required Tests</u>	<u>Frequency</u>	<u>Alternate Test</u>
Full Stroke Closed	Quarterly	Full Stroke Closed Refueling if Non-Intrusive Testing Available, Otherwise Disassemble, Inspect, Stroke one valve each refueling
Full Stroke Open	Quarterly	Part Stroke Open Operating- Full Stroke Open Refueling

ATJ Number: 039

Valve Id: 2-SI-008

Category: C

Class: 2

Open Safety Function: Open to provide Refueling Water Storage Tank or containment sump water from the High Pressure Safety Injection pumps to the reactor vessel.

Close Safety Function: None

Basis For Deferral: Valve cannot be full stroke exercised during reactor operation since the only full flow path is into the Reactor Coolant System. HPSI pumps do not have sufficient discharge pressure to overcome Reactor Coolant System pressure. Valve cannot be full stroke exercised during cold shutdown since full HPSI flow into the Reactor Coolant System could result in overpressurization. There is not installed instrumentation that would allow close stroke testing during reactor operation, cold shutdown or refueling.

2

OM-10 permits part stroke testing during reactor operation and deferral of full stroke testing to Cold Shutdown if it is impractical during reactor operation and to Refueling if it is impractical to conduct testing during reactor operation or cold shutdown.

Comments:

<u>Required Tests</u>	<u>Frequency</u>	<u>Alternate Test</u>
Full Stroke Open	Quarterly	Part Stroke Open Operating- Full Stroke Open Refueling

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Third Ten Year Interval
Revision 7 Change 2
25 June 1999

Millstone Unit 2 Alternate Test Justifications

ATJ Number: 040

Valve Id: 2-SI-217 2-SI-227 2-SI-237 2-SI-247

Category: C

Class: 1

Open Safety Function: Open to provide Safety Injection Tank, High Pressure Safety Injection, and Low Pressure Safety Injection flow paths to the reactor vessel.

Close Safety Function: Close to provide reactor coolant pressure boundary.

Basis For Deferral: Valves cannot be full stroke or part stroke exercised during reactor operation since the large temperature difference between the Safety Injection system and the Reactor Coolant system (approximately 400 degrees) would cause undue thermal stress of the safety injection nozzles.

OM-10 permits deferral of testing to Cold Shutdown if it is impractical to conduct testing quarterly during operation and to Refueling if it is impractical to conduct testing quarterly while in operation or during cold shutdown.

OM-10 permits verification of check valve operability by disassembly each refueling outage if obturator movement cannot be verified during operation, cold shutdown or refueling.

Generic Letter 89-04, NRC Staff Position 2 authorizes sample disassembly of check valves when the licensee determines that it is burdensome to disassemble and inspect all applicable valves each refueling.

Comments:

<u>Required Tests</u>	<u>Frequency</u>	<u>Alternate Test</u>
Full Stroke (Open and Closed)	Quarterly	Part Stroke Test (Open) Cold Shutdown - Full Stroke Test Refueling if Non-Intrusive Testing Available, Otherwise Disassemble, Inspect, Stroke one valve each refueling

2

ATJ Number: 045

Valve Id: 2-CS-15A 2-CS-15B

Category: C

Class: 2

Open Open to provide cooling water from the containment sump to the High Pressure
Safety Function: Safety Injection and Containment Spray pumps.

Close None
Safety Function:

Basis System configuration prevents any meaningful stroke test during operation, cold
For Deferral: shutdown or refueling.

2

OM-10 permits deferral of testing to Cold Shutdown if it is impractical to conduct testing quarterly during operation and to Refueling if it is impractical to conduct testing quarterly while in operation or during cold shutdown

OM-10 permits verification of check valve operability by disassembly each refueling outage if obturator movement cannot be verified during operation, cold shutdown or refueling.

Generic Letter 89-04, NRC Staff Position 2 authorizes sample disassembly of check valves when the licensee determines that it is burdensome to disassemble and inspect all applicable valves each refueling.

Comments:

<u>Required Tests</u>	<u>Frequency</u>	<u>Alternate Test</u>
Full Stroke (Open and Closed)	Quarterly	Disassemble, Inspect, Stroke Test one valve each refueling

ATJ Number: 049

Valve Id: 2-CH-769

Category: C

Class: 2

Open None

Safety Function:

Close Close during boric acid injection to the charging pump suction to prevent diversion of boric acid.

Safety Function:

Basis For Deferral: The installed system does not include provision for close testing of this valve under any plant condition. There is no way to test for system backflow.

2

OM-10 permits deferral of testing to Cold Shutdown if it is impractical to conduct testing quarterly during operation and to Refueling if it is impractical to conduct testing quarterly while in operation or during cold shutdown.

OM-10 permits verification of check valve operability by disassembly each refueling outage if obturator movement cannot be verified during operation, cold shutdown or refueling.

Generic Letter 89-04, NRC Staff Position 2 authorizes sample disassembly of check valves when the licensee determines that it is burdensome to disassemble and inspect all applicable valves each refueling.

Comments:

<u>Required Tests</u>	<u>Frequency</u>	<u>Alternate Test</u>	
Full Stroke Closed	Quarterly	Dissassemble, Inspect, Stroke Test valve each refueling	2

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Third Ten Year Interval
Revision 7 Change 2
25 June 1999

Millstone Unit 2 Alternate Test Justifications

ATJ Number: 052

Valve Id: 2-RC-041

Category: C

Class: 1

Open Safety Function: Allow discharge from relief valve 2-SI-466

Close Safety Function: None - Normal function is to prevent gas release from Quench Tank

Basis For Deferral: There are no test connections or other methods other than lifting relief valve 2-SI-466 to induce flow in this line. There is no way to measure flow in this line.

OM-10 permits deferral of testing to Cold Shutdown if it is impractical to conduct testing quarterly during operation and to Refueling if it is impractical to conduct testing quarterly while in operation or during cold shutdown.

OM-10 permits verification of check valve operability by disassembly each refueling outage if obturator movement cannot be verified during operation, cold shutdown or refueling.

Generic Letter 89-04, NRC Staff Position 2 authorizes sample disassembly of check valves when the licensee determines that it is burdensome to disassemble and inspect all applicable valves each refueling.

Comments:

<u>Required Tests</u>	<u>Frequency</u>	<u>Alternate Test</u>	
Full Stroke Open	Quarterly	Dissassemble, Inspect, Stroke Test valve each refueling	<u>2</u>

2