



**Northeast  
Nuclear Energy**

Rope Ferry Rd. (Route 156), Waterford, CT 06385

Millstone Nuclear Power Station  
Northeast Nuclear Energy Company  
P.O. Box 128  
Waterford, CT 06385-0128  
(860) 447-1791  
Fax (860) 444-4277

The Northeast Utilities System

FEB 28 2001

Docket No. 50-423  
B18331

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

**Millstone Nuclear Power Station, Unit No. 3  
Commitment Changes Associated with  
Service Water System - Generic Letter 89-13 (TAC No. 74027)**

On May 6, 1998,<sup>(1)</sup> Northeast Nuclear Energy Company (NNECO) submitted supplemental information regarding the Millstone Unit No. 3 response to the Nuclear Regulatory Commission (NRC) Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment."<sup>(2)</sup> In that letter, NNECO committed to thermal performance testing of certain safety related heat exchangers in order to demonstrate continued compliance with design basis performance assumptions. The purpose of this correspondence is to notify the NRC of a change to the commitments identified in the May 1998 NNECO letter. Specifically, NNECO has determined that thermal performance testing of the Reactor Plant Component Cooling Water (CCP) heat exchangers is not viable. Consequently NNECO will implement alternative actions as allowed by Generic Letter 89-13 for these components.

NNECO considers that these changes are consistent with the guidance established within Item II of the Generic Letter. Additional details regarding the commitments associated with CCP heat exchanger testing are provided in Attachment 1.

There are no new regulatory commitments contained within this letter.

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(1) NNECO letter from M. L. Bowling, Jr., "Millstone Nuclear Power Station, Unit No. 3, Service Water System - Generic Letter 89-13 (TAC No. 74027)," dated May 6, 1998, (B17205).

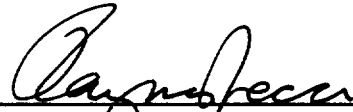
(2) NRC Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment," dated July 18, 1989.

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If you should have any questions on the above, please contact Mr. David W. Dodson at (860) 447-1791, extension 2346.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY




Raymond P. Necci

Vice President - Nuclear Technical Services

Sworn to and subscribed before me

this 28<sup>th</sup> day of February, 2001

  
\_\_\_\_\_  
Notary Public

My Commission expires \_\_\_\_\_

**SANDRA J. ANTON  
NOTARY PUBLIC  
COMMISSION EXPIRES  
MAY 31, 2005**

Attachment (1)

cc: H. J. Miller, Region I Administrator  
V. Nerses, NRC Senior Project Manager, Millstone Unit No. 3  
A. C. Cerne, Senior Resident Inspector, Millstone Unit No. 3

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**Attachment 1**

**Millstone Nuclear Power Station, Unit No. 3**

**Commitment Changes Associated with  
Reactor Plant Component Cooling Water Heat Exchangers**

**Commitment Changes Associated with  
Reactor Plant Component Cooling Water Heat Exchangers**

**Background:**

In a letter dated May 6, 1998,<sup>(1)</sup> Northeast Nuclear Energy Company (NNECO) provided an updated response to Generic Letter (GL) 89-13 Item II for Millstone Nuclear Power Station, Unit No. 3. Item II of the GL recommends that licensees conduct a heat transfer performance testing program on safety-related heat exchangers in open-cycle systems. NNECO's updated response to the GL contained the following five (5) commitments regarding baseline and periodic tests of the Reactor Plant Component Cooling Water (CCP) heat exchangers:

- B17205-04: The baseline testing of two of the three reactor plant component cooling water [CCP] heat exchangers will be complete by the end of RFO6 [refueling outage 6]. (3CCP\*E1A, 3CCP\*E1B, 3CCP\*E1C)
- B17205-05: The baseline testing of the third of the three reactor plant component cooling water heat exchangers will be complete by the end of RFO7 [refueling outage 7].
- B17205-07: Performance of three tests on the reactor plant component cooling water heat exchangers will be complete by the end of RFO10 [refueling outage 10]. (3CCP\*E1A, 3CCP\*E1B, 3CCP\*E1C)
- B17205-09: These tests will provide the basis for establishing the required retest frequency in accordance with the recommendations of the GL 89-13, Section II. CCP [tests] will be complete prior to RFO11 [refueling outage 11].
- B17205-11: All components shall be retested on the established frequency or the recommended maximum of 5 years. This shall be established prior to RFO11 [refueling outage 11] for CCP.

**Description of Change in Commitments:**

Commitment B17205-04 was completed during the sixth refueling outage. The remaining commitments involving performance of baseline and periodic tests of CCP heat exchangers are being cancelled.

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<sup>(1)</sup> NNECO letter from M. L. Bowling, Jr., "Millstone Nuclear Power Station, Unit No. 3, Service Water System - Generic Letter 89-13 (TAC No. 74027)," dated May 6, 1998, (B17205).

Justification:

Heat exchangers 3CCP\*E1A, 3CCP\*E1B and 3CCP\*E1C were part of the original group of safety-related heat exchangers cooled by Service Water on which NNECO committed to conduct performance testing. When the commitments for performing the baseline tests and retests of the CCP heat exchangers were made, these heat exchangers were considered testable. More recently, however, tests on two of these heat exchangers (3CCP\*E1A and 3CCP\*E1B), conducted during the sixth refueling outage, produced inconclusive results due to seawater cooling temperatures that were significantly below maximum design value. Consequently, analysis to establish heat transfer coefficients for the heat exchangers was not practical. NNECO has since concluded that the CCP heat exchangers cannot be meaningfully baseline tested, or periodically retested, to verify heat transfer capability.

The GL 89-13 Item II recommendations for establishing a program for testing heat transfer capability provides for alternative action that includes frequent regular maintenance of a heat exchanger in lieu of testing for degraded performance of the heat exchanger. NNECO will rely on this alternative for the CCP heat exchangers to address GL 89-13 recommendations.

The CCP heat exchangers are located in a low radiation area and are accessible for cleaning and close visual inspection by removing the heat exchanger heads, thus exposing the inlet, outlet and return tube sheets. This allows direct access to both ends of the heat exchanger and allows maintenance personnel to use light to observe the inside of each tube to verify that it is clear of fouling. Cleaning of the CCP heat exchangers will initially be performed on an annual basis to ensure that the heat exchangers remain able to fulfill their design heat removal function at design conditions. The periodicity of these cleanings will be evaluated and adjusted as necessary based on the results of planned inspections / cleanings and ongoing performance monitoring.

The annual frequency for cleaning has been derived from routine observations of heat exchanger performance. These observations include trending of the data collected from weekly surveillances on flow, differential pressure and temperature, and the results of the visual inspections and cleanings conducted to date. These performance observations support NNECO's determination that the CCP heat exchangers will remain operable during the interval between cleanings. Visual inspection results have consistently showed no significant macro-fouling exists in the CCP heat exchangers which would affect operability. Additionally, based on thermal performance testing, fouling from mechanisms difficult to detect by visual inspection, such as scaling, have not been seen to affect the heat transfer capability of Unit No. 3 heat exchangers. The above observations of heat exchanger performance, the annual cleaning, and the impracticality of thermal performance testing the CCP heat exchangers support NNECO's conclusion that these heat exchangers will continue to meet design basis performance assumptions.