NORTHEAST UTILITIES
THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

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P.O. BOX 270
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(203) 665-5000

August 24, 1990

Docket No. 50-423
B13618
Re: ASME Section XI

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

Gentlemen:

Millstone Nuclear Power Station, Unit No. 3
Request for Additional Information
Modification to Pipe 3SWP-005-050-03

In a letter dated April 20, 1990,(1) Northeast Nuclear Energy Company (NNECO) submitted to the NRC Staff our generic position for dealing with interim repairs of leaks in service water piping. Subsequent to this letter, the NRC issued Generic Letter 90-05 which provides formal generic guidance on service water noncode repairs.

In a letter dated August 15, 1990,(2) NNECO submitted to the NRC Staff a request for relief from ASME Boiler and Pressure Vessel Code Section XI requirements pursuant to 10CFR50.55a(g)(6)(i), for repairs to Millstone Unit No. 3 pipe 3SWP-006-050-03. In a telephone conversation on August 17, 1990, the NRC Staff requested additional information on the August 15 relief request. The purpose of this letter is to provide the requested information. This letter should be considered an addendum to the August 15 relief request.

Please note that we have adopted a form for providing details of relief requests from ASME Section XI requirements which we propose to use in the future.

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(1) E. J. Mroczka letter to U.S. Nuclear Regulatory Commission, "Repairs to Service Water Piping," dated April 20, 1990.

(2) E. J. Mroczka letter to U.S. Nuclear Regulatory Commission, "Relief Request from ASME Code Section XI Requirements," dated August 15, 1990.

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U[illegible] egulatory Commission
[illegible], 1990

Please contact us if you have any questions.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

E. J. Mroczka
Senior Vice President

cc: T. T. Martin, Region I Administrator
D. H. Jaffe, NRC Project Manager, Millstone Unit No. 3
W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3

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Addendum to Relief Request from ASME Section XI

August 1990

DETAILS PERTAINING TO RELIEF FROM ASME SECTION XI REQUIREMENTS

A. DESIGN DETAILS

Piping System: Service Water System serving Control Bldg Air Conditioning

Pipe size and Schedule: 6 in Sch 10S

Pipe Nominal Wall Thickness: 0.134 inch

Pipe safety Code class: Class 3

Pipe Material: 90-10 Cu-Ni

Design Pressure: 100 psig

Design/Operating Temperature: 95 / 95 Degrees F

Code Minimum Wall Thickness: 0.038 inch

B. FLAW CHARACTERIZATION

Flaw Description/size (i.e. Location, Hole size, adjacent wall thickness, single/multiple flaw, total area examined, etc.):

A leak from pipe flange adjacent to Butterfly valve 3-SWP*V47 was observed on July 27, 1990. A 5 inch long pipe section was examined by UT. Grid size used for UT was 1.25 inch in axial direction and 0.5 inch in tangential direction. This examination revealed wall thinning in the vicinity of the pin hole leak. The wall thickness adjacent to the pin hole varied from .035 in to .050 inch.

Examination Method: Ultrasonic

Flaw Type: Thru-wall

DETAILS PERTAINING TO RELIEF FROM ASME SECTION XI REQUIREMENTS

C. ROOT CAUSE INVESTIGATION

Root Cause Description: Erosion/corrosion due to local turbulence created by continuous valve throttling.

D. DESCRIPTION OF PROPOSED TEMPORARY REPAIR

Pin hole is plugged by placing a rubber tape between the lap joint flange and pipe.

E. EVALUATION SUMMARY

Method used (i.e. LEFM, Area Reinforcement, Wall Thinning):

Area Reinforcement

Estimated Wall Erosion Rate: 0.002 inch per month

Projected Flaw Size: Size based on maximum dimension not meeting Code minimum wall thickness of 0.038 inch is 2.5 inch

Period of time to permanent Repair/Replacement: A maximum of 6 months

Design Loading Conditions met? Yes for service levels A, B and D.

System Interaction Evaluation
(i.e. Flooding?, Jet sprays?, loss of flow?, etc.)

Flooding is not a concern as flaw is a pin hole leak which has been plugged for now and is expected to have minimal growth because of the small erosion rate.

Jet sprays and loss of flow will be prevented as the hole is covered by the flange.

Impact to Safe Shutdown Capability? None as this system is not a part of Safe Shutdown system.

DETAILS PERTAINING TO RELIEF FROM ASME SECTION XI REQUIREMENTS

F. FLAW MONITORING

Walkdowns: This area is subject to routine operator walkdowns every shift

Follow-up NDE: None required as the erosion rate is small.

Additional Examinations Required (Based on root cause)

Other similar areas on "A" train are scheduled to be inspected during the next two weeks. The remaining "B" train location will be inspected next month.

G. AUGMENTED INSPECTION OF AFFECTED SYSTEM

Assessment of overall degradation:

Overall degradation is localized and root cause is well established.

If Additional examinations are required Specify Number of Inspection Locations:

4 locations

Description of areas selected for Augmented inspection:

Copper nickel pipe downstream of all throttled butterfly valves in the auxiliary system will be inspected by disassembling the flanges.

H. ADDITIONAL COMMENTS

None